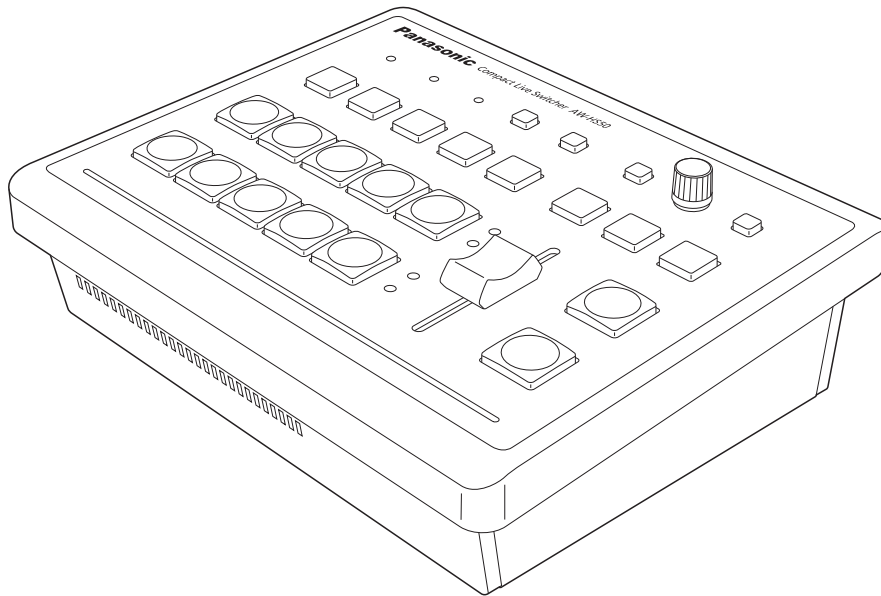


Panasonic[®]

Operating Instructions <Operations and Settings>

Compact Live Switcher

Model No. **AW-HS50N**



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How the model's Operating Instructions manuals are configured

- The manual of this Compact Live Switcher (hereafter, "the unit") is divided into two manuals: one is the <Operations and Settings> (this manual in the CD-ROM), and the other is the <Basics>. Before installing the unit, be sure to read the <Basics> to ensure that the unit is installed correctly.

Before use

■ Overview

This unit is a 1 ME digital video switcher which supports a multiple number of HD and SD formats.

Despite its compact size, it comes with four SDI inputs, one DVI-D input, two SDI outputs and one DVI-D output.

In addition to its background transition capabilities that use the cut, mix and wipe functions, one keyer channel and one PinP channel are provided to enable video productions in a wide variety of forms.

Furthermore, using the multi view display settings, the screen of a monitor can be split into a number of sections to accommodate up to ten images, enabling the number of monitors to be reduced and a space-saving system to be configured at low cost.

By means of the IP connection, an operating environment where the unit is tied in with the AW-HE50 HD integrated camera and AW-RP50 remote camera controller is achieved.

■ Concerning the Operating Instructions

- For the purposes of these instructions, AW-HS50N is referred to as “AW-HS50”. Similarly, “AW-HE50HN” and “AW-HE50SN” are referred as “AW-HE50,” and AW-RP50N is referred to as “AW-RP50”.
- In these instructions, the phrases “pan-tilt head and camera combination” and “camera integrated with a pan-tilt head” are both referred to collectively as “**remote camera**” except in places where specific equipment is mentioned.

■ Trademarks and registered trademarks

- Microsoft, Windows, Windows Vista, Windows 7 and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.
- Intel and Intel Core are trademarks or registered trademarks of Intel Corporation in the United States and other countries.
- Adobe and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Other names of companies and products contained in these Operating Instructions may be trademarks or registered trademarks of their respective owners.

■ About copyright and licence

Distributing, copying, disassembling, reverse compiling, reverse engineering, and also exporting in violation of export laws of the software provided with this unit are expressly prohibited.

■ Concerning the ratings display

The unit's name, model number and electrical ratings are indicated on its bottom panel.

■ Disclaimer of warranty

IN NO EVENT SHALL Panasonic Corporation BE LIABLE TO ANY PARTY OR ANY PERSON, EXCEPT FOR REPLACEMENT OR REASONABLE MAINTENANCE OF THE PRODUCT, FOR THE CASES, INCLUDING BUT NOT LIMITED TO BELOW:

- ① ANY DAMAGE AND LOSS, INCLUDING WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, CONSEQUENTIAL OR EXEMPLARY, ARISING OUT OF OR RELATING TO THE PRODUCT;
- ② PERSONAL INJURY OR ANY DAMAGE CAUSED BY INAPPROPRIATE USE OR NEGLIGENT OPERATION OF THE USER;
- ③ UNAUTHORIZED DISASSEMBLE, REPAIR OR MODIFICATION OF THE PRODUCT BY THE USER;
- ④ INCONVENIENCE OR ANY LOSS ARISING WHEN IMAGES ARE NOT DISPLAYED, DUE TO ANY REASON OR CAUSE INCLUDING ANY FAILURE OR PROBLEM OF THE PRODUCT;
- ⑤ ANY PROBLEM, CONSEQUENTIAL INCONVENIENCE, OR LOSS OR DAMAGE, ARISING OUT OF THE SYSTEM COMBINED BY THE DEVICES OF THIRD PARTY;
- ⑥ ANY INCONVENIENCE, DAMAGES OR LOSSES RESULTING FROM ACCIDENTS CAUSED BY AN INADEQUATE INSTALLATION METHOD OR ANY FACTORS OTHER THAN A DEFECT IN THE PRODUCT ITSELF;
- ⑦ LOSS OF REGISTERED DATA CAUSED BY ANY FAILURE;
- ⑧ ANY DAMAGES, CLAIMS, ETC. DUE TO LOSS OR LEAKAGE OF IMAGE DATA OR SETTING DATA SAVED ON THIS UNIT OR IN A PERSONAL COMPUTER.

■ Network security

As you will use this unit connected to a network, your attention is called to the following security risks.

- ① Leakage or theft of information through this unit
- ② Use of this unit for illegal operations by persons with malicious intent
- ③ Interference with or stoppage of this unit by persons with malicious intent

It is your responsibility to take precautions such as those described below to protect yourself against the above network security risks.

- Use this unit in a network secured by a firewall, etc.
- If this unit is connected to a network that includes PCs, make sure that the system is not infected by computer viruses or other malicious entities (using a regularly updated antivirus program, anti-spyware program, etc.).
- Refrain from connections that use public lines.

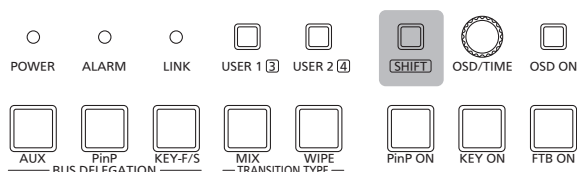
1. Basic operations

1-1. Background transitions

1-1-1. Selecting the bus

Press one of the A bus or B bus crosspoint buttons to select the material for which the background transition is to be executed.

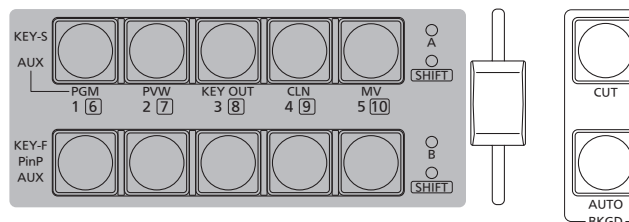
When the material is selected, the indicator of the button that has been pressed lights.



1-1-2. Select the bus using the SHIFT function

Crosspoint buttons 6 to 10 can be selected while the SHIFT button is held down.

When the crosspoint button 6 to 10 materials have been selected, the SHIFT lamps on the right of the A and B crosspoint buttons light.



1-1-3. Assigning signals to the crosspoint buttons

External video input signals and internally generated signals can be assigned to crosspoint buttons 1 to 10.

[9] XPT SW Assign Menu

1. XPT1
to
10. XPT10

[9] XPT SW Assign Menu		
> 1. XPT1	SDI-IN1	(INPUT1)
2. XPT2	SDI-IN2	(INPUT2)
3. XPT3	SDI-IN3	(INPUT3)
4. XPT4	SDI-IN4	(INPUT4)
5. XPT5	DVI-IN	(INPUT5)
6. XPT6	FMEM1	
7. XPT7	FMEM2	
8. XPT8	CBGD	
9. XPT9	CBAR	
10. XPT10	Black	

The signal assignment statuses are displayed in the “1. XPT1” to “10. XPT10” items.

The “1. XPT1” to “10. XPT10” items can be set, and the following materials can be assigned.

Crosspoint button	Name of material	Material
1 to 10	SDI-IN1 to SDI-IN4	SDI inputs 1 to 4
	DVI-IN	DVI-D input
	FMEM1, FMEM2	Frame memory images
	CBGD	Internally generator signal (color background)
	CBAR	Internally generator signal (color bars)
	Black	Internally generator signal (black signal)
	NoAssign	No signal assigned

- The video signals will not be switched even if a button with the “NoAssign” assigned to it is pressed.

1. Basic operations

1-1-4. Selecting the bus mode

The bus mode can be set by the following menu operations.

[13] Operation Menu 5. Bus Mode

A/B:

When the slide lever is at side A, the signals selected by the A bus are replaced PGM materials.

When the slide lever is at side B, the signals selected by the B bus are replaced PGM materials.

PGM (A)/PST (B):

Using a flip-flop system, the signals selected by the A bus are always replaced PGM materials, and the signals selected by the B bus are always replaced PST materials.

PGM (B)/PST (A):

Using a flip-flop system, the signals selected by the B bus are always replaced PGM materials, and the signals selected by the A bus are always replaced PST materials.

1-1-5. Selecting the transition type

Use the MIX button and WIPE button to select the background transition mode.

1-1-6. Manual transitions

Operate the slide lever to execute transitions manually. If the slide lever is moved while an auto transition is executed, operation will switch to manual as soon as the position of the slide lever has gone beyond the amount of the transition which has been executed.

The bus tally indicators on the left of the lever show the program output statuses.

When only indicator A is lighted:

Only the A bus is output

When both indicators A and B are lighted:

Transition underway

When only indicator B is lighted:

Only the B bus is output

<Setting the slide lever function>

[13] Operation Menu 7. Slide Lever

Any of the following targets for which the transition is to be executed can be set by operating the slide lever.

BKGD:	Background transition
KEY:	Key transition
PinP:	PinP transition
BKGD+KEY:	Background transition and key transition will be executed concurrently.
NoAssign:	Transitions are not executed even when the slide lever is operated.

1. Basic operations

1-1-7. Auto transition

When the AUTO button is pressed, the background transition is executed automatically for the transition duration which has been set.

When it is pressed while the slide lever is at a midway setting, the transition is executed for the duration remaining from the midway setting.

The transition duration can be set using the following menu operation.

[1] TIME/CBGD Menu 1. AUTO Time

When the AUTO button is held down, the time setting is displayed on the OSD menu so the setting can now be changed while checking what is displayed.

The display unit of TIME/CBGD Menu can be changed using the following menu operation.

[13] Operation Menu 6. Time Unit

Either seconds or frames can be selected as the display unit.

Any time from “0f” to “999f” can be set when using frames as the display unit. The time that can be set when using seconds as the display unit differs depending on the video format.

59.94i: max 33s09f	50p: max 19s49f
59.94p: max 16s39f	24PsF: max 41s15f
50i: max 39s24f	23.98PsF: max 41s15f

- Even when the “KEY”, “PinP”, “BKGD+KEY” or “NoAssign” has been selected as the setting of the slide lever function, the background always serves as the target for executing auto transitions.

1-1-8. Cut transition

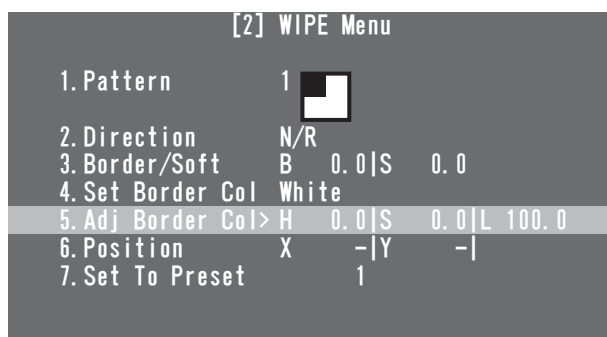
When the CUT button is pressed, the background transition is executed instantly.

- Even when the “KEY”, “PinP”, “BKGD+KEY” or “NoAssign” has been selected as the setting of the slide lever function, the background always serves as the target for executing cut transitions.

1. Basic operations

1-2. Wipe

Wipe patterns or borders can be set for executing the background transition.



1-2-1. Selecting the wipe pattern

[2] WIPE Menu 1. Pattern

The wipe pattern can be selected by turning the OSD/TIME dial.

Wipe patterns and their numbers				
1	2	3	4	5
6	7	8	9	10
11	12	13		

- The wipe pattern can also be changed by turning the OSD/TIME dial while pressing the WIPE button without performing a menu operation.

1-2-2. Selecting the wipe direction

[2] WIPE Menu 2. Direction

This item is used to select the wipe direction.

N(Normal):

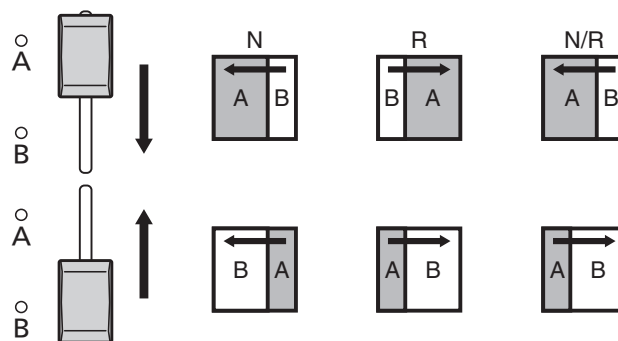
Wiping proceeds in the normal direction.

R(Reverse):

Wiping proceeds in the reverse direction.

N/R(Normal/Reverse):

The normal direction is replaced with the reverse direction (or vice versa) when the transition is completed.



1-2-3. Setting the border width and soft effect

[2] WIPE Menu 3. Border/Soft

[B: Border]

This is used to set the border width for wiping.

Select "0.0" as the setting if no effects are to be added to the borders.

[S: Soft]

This is used to set the amount of the soft effects.

This amount indicates the ratio of the soft effect to the border width.

When only the soft effect is to be added to wipe, set B (border) to "0.0".

1. Basic operations

1-2-4. Setting the border color

[2] WIPE Menu 4. Set Border Col

This item is used to select any of the following colors for the borders.

White, Yellow, Cyan, Green, Magenta, Red, Blue, Black

1-2-5. Adjusting the border color

[2] WIPE Menu 5. Adj Border Col

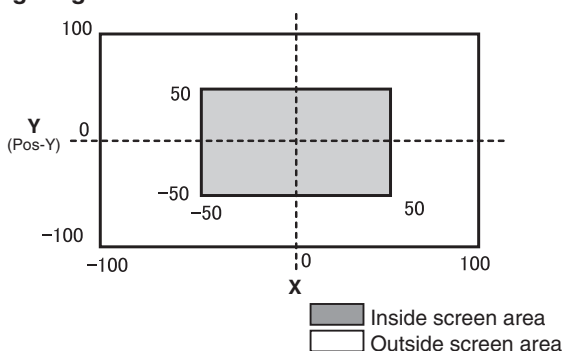
This item is used to adjust the hue (H), saturation (S) and luminance (L) of the color which has been set for the borders.

1-2-6. Setting the wipe start position

[2] WIPE Menu 6. Position

This item is used to set the position where the transition is to start for wipe patterns No.9, 10, 11, 12 and 13 using the X and Y coordinates.

<Setting range of the X and Y coordinates>



- When the submenu [2] WIPE Menu is displayed, direct operations using the USER buttons and OSD/TIME dial are enabled.

☞ Refer to “2-5-6. Direct operations using the USER buttons and OSD/TIME dial” (<Basics> Operating Instructions).

<Direct operation status display>

U1: Pos-X (X coordinate), U2: Pos-Y (Y coordinate),
U3: —, U4: —

1-2-7. Registering and recalling the preset memories

[2] WIPE Menu 7. Set To Preset

Up to four sets of wipe settings can be registered in the preset memories.

<Registering the settings in the preset memories>

Select 1, 2, 3 or 4, and press the OSD/TIME dial.

The status currently set is now registered in the selected preset number.

<What can be registered in the preset memories>

- Wipe patterns
- Wipe directions
- Border width of wipe
- Soft effect amount
- Border colors
- Position at which the transition starts

<Calling the preset memory settings>

What has been registered in the preset memories can be called using the USER buttons.

- Before any settings are registered or recalled, “WIPE Preset” must be selected by operating the menu item below and the settings must be assigned to the USER buttons.

[12] USER/FMEM Menu 1. USER1

1. Basic operations

1-3. KEY

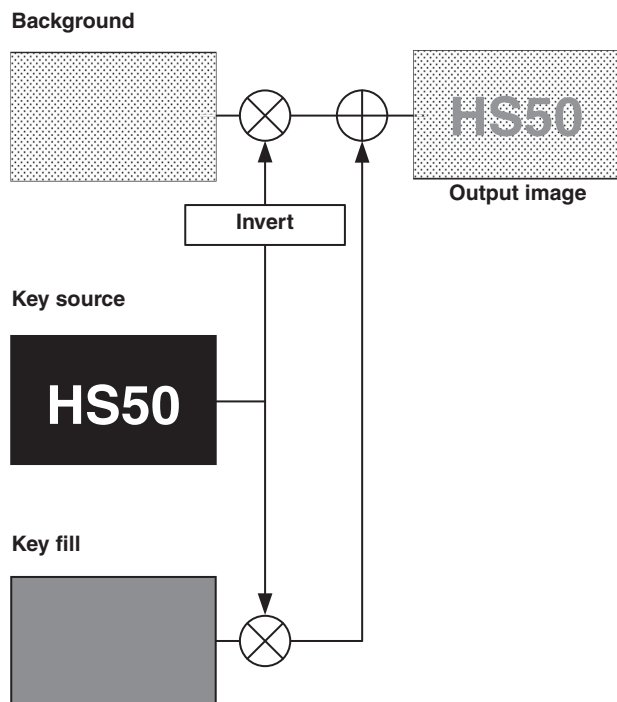
1-3-1. Concerning key combinations

This operation combines another image with the background image.

In addition, how the key is to be defined can be adjusted, and an edge can be added to the image to be combined with the background.

How key combinations work is shown in the figure below.

<How key combination works>



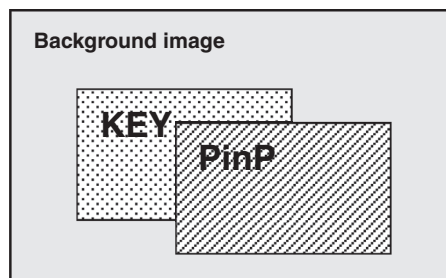
1-3-2. Setting the PinP and KEY priority

Besides keys, PinP (picture in picture) is also available as material to be combined with the background image.

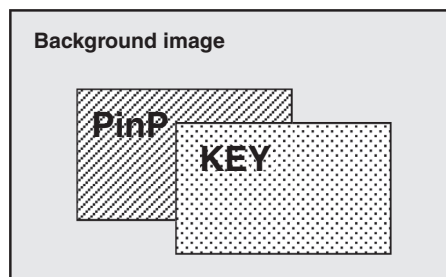
The display priority of the images (that is, which images are shown in front of which images) can be changed using the following menu operation.

[13] Operation Menu 4. Key Priority

PinP over KEY



KEY over PinP



1. Basic operations

1-3-3. Selecting the key materials

Select the key materials using the A bus and B bus crosspoint buttons.

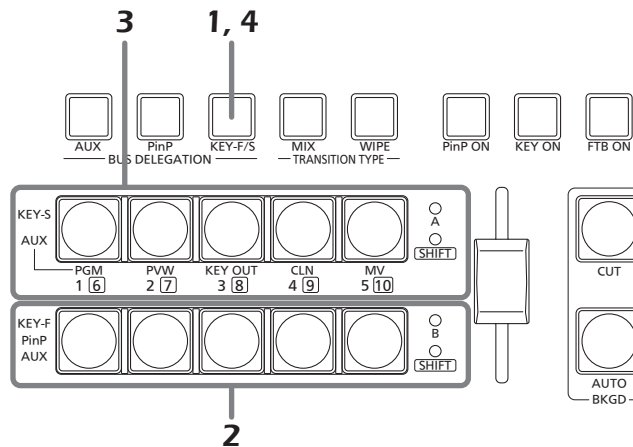
- 1 Press the KEY-F/S button to set the crosspoint buttons to the key bus material selection mode.

The indicator of the KEY-F/S button blinks.

- 2 Select the key fill signal using the B bus crosspoint buttons.

- 3 Select the key source signal using the A bus crosspoint buttons.

- 4 Press the KEY-F/S button to release the bus selection mode of the crosspoint buttons.



1-3-4. Key transition

When the KEY ON button is pressed, the key transitions (fades in) for the transition duration which has been set.

<Setting the transition duration>

[1] TIME/CBGD Menu 3. KEY Time

- The transition duration can also be changed by turning the OSD/TIME dial while pressing the KEY ON button. When the KEY ON button is held down, the duration setting is displayed on the OSD menu so the setting can now be changed while checking what is displayed.

The key transition can also be executed by operating the slide lever.

<Selecting the slide lever operation>

[13] Operation Menu 7. Slide Lever

1. Basic operations

1-3-5. Key setup

The key type and other settings can be selected.

[4] KEY Setup Menu			
> 1. Key Type	Luminance (ChrmOff)		
2. Fill	Bus		
3. PVW	On		
4. Set Fill Col	White		
5. Adj Fill Col	H	0.0 S	0.0 L 100.0
6. Edge Type	Off		
7. Edge Direction	-		
8. Edge Width	-		
9. Set Edge Col	Black		
10. Adj Edge Col	H	0.0 S	0.0 L 0.0

● Key Type

[4] KEY Setup Menu 1. Key Type

This item is used to select the key type.

Luminance(ChrmOff)

(luminance key/chroma off: Self key):

The key signal is created from the luminance component of the key fill signal.

Luminance(ChrmOn)

(luminance key/chroma on: Self key):

The key signal is created from the luminance and chrominance components of the key fill signal.

Linear (linear key: EXT key):

The key signal is created from the luminance component of the key source signal.

This setting is used when the key source signal and key fill signal are different.

Chroma (Chroma key: Self key):

The key signal is created using a specific hue of the key fill signal as a reference.

Since the luminance key and chrominance key function as self keys, the key fill signal is used as the key source signal. When the luminance key or chrominance key has been selected as the key type, the key signal remains unchanged even when the key source signal is switched.

When the linear key is used, use a material with a black background and white characters or shapes to be used for the key combination as the key source signal. The key combination may not be achieved neatly with materials having colors other than black and white.

With materials with a white background and black characters, for example, the key level can be reversed and used by selecting ON for the key invert setting.

<Setting the key invert>

[5] KEY Adjust Menu 4. Invert

● Fill

[4] KEY Setup Menu 2. Fill

This item is used to select the fill type.

Bus:

The bus signal is used for the key fill signal.

Matte:

The internal fill matte is used for the key fill signal.

● PVW

[4] KEY Setup Menu 3. PVW

This item enables an image with key effects added to be output for the PVW image to adjust and check the key.

On: An image with key effects added is output for the PVW image.

Off: An image with no key effects added is output for the PVW image.

● Set Fill Col

[4] KEY Setup Menu 4. Set Fill Col

This item is used to select any of the following colors for the fill matte.

White, Yellow, Cyan, Green, Magenta, Red, Blue, Black

● Adj Fill Col

[4] KEY Setup Menu 5. Adj Fill Col

This item is used to adjust the hue (H), saturation (S) and luminance (L) of the color which has been set for the fill matte.

1. Basic operations

● Edge Type

[4] KEY Setup Menu 6. Edge Type

This item is used to add borders, shadows or other edges to the key.

Off:

An edge is not added.

Border:

A border is added around the entire frame.

Drop:

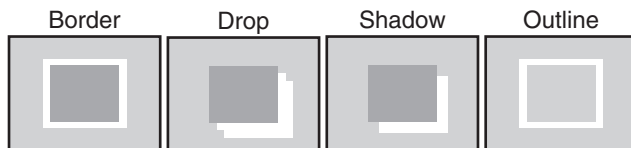
A diagonal border is added.

Shadow:

A shadow is added.

Outline:

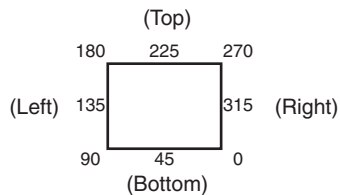
An outline (only a border with no fill) is added.



● Edge Direction

[4] KEY Setup Menu 7. Edge Direction

This item is used to set the direction (in 45-degree increments) in which to add “Drop” or “Shadow”.



● Edge Width

[4] KEY Setup Menu 8. Edge Width

This item is used to set the edge width.

● Set Edge Col

[4] KEY Setup Menu 9. Set Edge Col

This item is used to select any of the following colors for the edges.

White, Yellow, Cyan, Green, Magenta, Red, Blue, Black

● Adj Edge Col

[4] KEY Setup Menu 10. Adj Edge Col

This item is used to adjust the hue (H), saturation (S) and luminance (L) of the color which has been set for the edges.

1. Basic operations

1-3-6. Key adjustments

How the key is to be defined can be adjusted.

[5] KEY Adjust Menu			
> 1. Clip		0.0	
2. Gain		100.0	
3. Density		100.0	
4. Invert		Off	
5. Mask		Off	
6. Mask Adjust1	L	- R	-
7. Mask Adjust2	T	- B	-
8. Mask Invert	-		

● Clip

[5] KEY Adjust Menu 1. Clip

This item is used to set the reference level for creating the luminance key and linear key.

- The item cannot be used when Chroma (chroma key/self key) has been selected as the key type.

● Gain

[5] KEY Adjust Menu 2. Gain

This item is used to set the amplification level of the luminance key and linear key.

- The item cannot be used when Chroma (chroma key/self key) has been selected as the key type.

● Density

[5] KEY Adjust Menu 3. Density

This item is used to adjust key density.

When "0" is selected as the setting, the keys will no longer be displayed.

● Invert

[5] KEY Adjust Menu 4. Invert

This item is used to set key invert.

- On:** The internally generated key signal is inverted.
Off: The key signal is not inverted.

● Mask

[5] KEY Adjust Menu 5. Mask

This item is used to set the masking method.

On: The area set using the "6. Mask Adjust1" and "7. Mask Adjust2" items is masked.

Off: The key signal is not masked.

● Mask Adjust1, Mask Adjust2

[5] KEY Adjust Menu 6. Mask Adjust1 7. Mask Adjust2

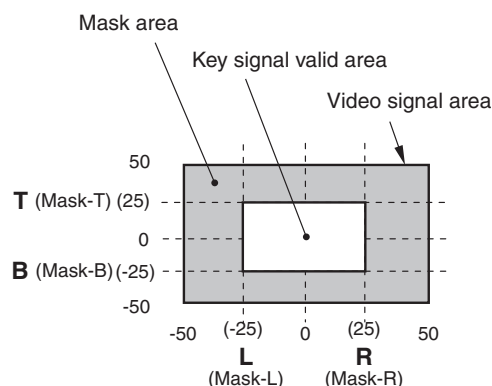
This item is used to set the area to be marked.

6. Mask Adjust1 item:

This sets the left (L) and right (R) of the area.

7. Mask Adjust2 item:

This sets the top (T) and bottom (B) of the area.



- When the submenu [5] KEY Adjust Menu is displayed, direct operations using the USER buttons and OSD/TIME dial are enabled.

Refer to "2-5-6. Direct operations using the USER buttons and OSD/TIME dial" (<Basics> Operating Instructions).

<Direct operation status display>

U1: Mask-L, U2: Mask-R, U3: Mask-T, U4: Mask-B

● Mask Invert

[5] KEY Adjust Menu 8. Mask Invert

This item is used to set the mask signal inversion.

On: The mask signal is inverted.

Off: The mask signal is not inverted.

1. Basic operations

1-3-7. Chroma key adjustments

How the chroma key is to be defined can be adjusted.

[6] ChromaKey Menu				
> 1. Marker	Off			
2. Sample	Start			
3. Marker Pos	X	- Y	- S	-
4. Marker Aspect	-			
5. Ref Adjust	H	354.0	S 100.0	L 7.0
6. Y-Influence	0.0			
7. Radius	H	100.0	S 50.0	
8. Soft	0.0			
9. Cancel	0.0			

Before proceeding with the adjustments, select “Chroma” as the key type using the menu item below.

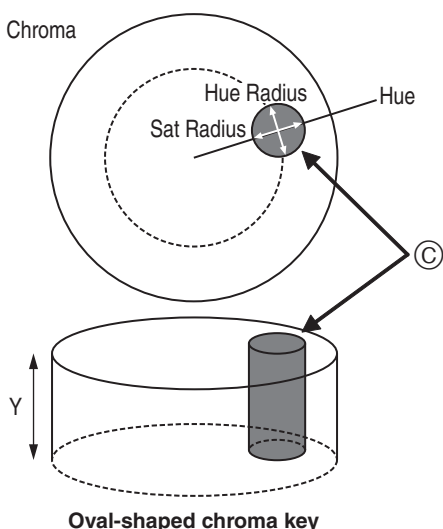
- When ON has been selected as the sample marker setting, “Chroma” is automatically selected as the key type.

[4] KEY Setup Menu 1. Key Type

As the chroma key, a key signal is created using a specific hue as a reference.

For instance, the key signal is created by detecting the color of the background from the image of a person standing in front of a specific background color, and another background is combined.

This unit uses an area system whose area is designated by a rectangular frame. The result of averaging the colors of the pixels inside that area is used as the chroma key reference color (key reference), and the maximum deviation from the average value is used as the radius of the chroma key oval. Chroma keys faithful to the chroma space sample (area ③ in the figure) can be generated.



■ Executing the sampling automatically

By specifying the area where the background is to be inserted, the chroma components are sampled.

● Marker

[6] ChromaKey Menu 1. Marker

This item is used to set the sample marker to ON to display the marker on the PVW image.

● Marker Pos

[6] ChromaKey Menu 3. Marker Pos

This item is used to adjust the X coordinate, Y coordinate and size of the sample marker.

● Sample

[6] ChromaKey Menu 2. Sample

Press the OSD/TIME dial to sample the hue components of the area selected by the sample marker.

- When sampling is completed, the image obtained by combining the chroma key with the PVW image is output. (Set the PVW function of the key to ON.)
- While the sample marker is displayed, direct operations using the USER buttons and OSD/TIME dial are enabled.
☞ Refer to “2-5-6. Direct operations using the USER buttons and OSD/TIME dial” (<Basics> Operating Instructions).

<Direct operation status display>

U1: Pos-X (X coordinate), U2: Pos-Y (Y coordinate),
U3: Size, U4: Aspect (Aspect ratio)

Sampling is initiated when the OSD/TIME dial is pressed after the sample marker has been adjusted.

1. Basic operations

■ Other chroma key settings

● Marker Aspect

[6] ChromaKey Menu 4. Marker Aspect

This item is used to change the aspect ratio of the sample marker.

● Ref Adjust

[6] ChromaKey Menu 5. Ref Adjust

This item makes it possible to change the color to be used as the chroma key reference from the sampled color.

H (Hue):

Hue to be used as the reference

S (Saturation):

Color saturation to be used as the reference

L (Luminance):

Luminance to be used as the reference

- After auto sampling is finished, the sampled values are displayed.

● Y-Influence

[6] ChromaKey Menu 6. Y-Influence

This item is used to set the extent of the influence to be exerted by the Y (luminance) component.
The higher the value set, the greater the influence, and with a “0” setting, the luminance component has no influence.

● Radius

[6] ChromaKey Menu 7. Radius

This item is used to set the range of the color to be defined.

H (Hue-Radius):

Extent of the range of the hue to be defined

S (Saturation-Radius):

Extent of the range of the color saturation to be defined

- After auto sampling is finished, the sampled values are displayed.

● Soft

[6] ChromaKey Menu 8. Soft

This item is used to adjust the amount of the soft effect on the boundary of the color to be defined.

● Cancel

[6] ChromaKey Menu 9. Cancel

This item is used to adjust the amount of color muting.
The color muting is adjusted when the background color is superimposed over the fill image.

Memo

Knack of adjusting the chroma key

The chroma key adjustments are facilitated by following the steps below.

- ① Initiate automatic sampling, and decide on the color to be defined.
 - ② Using the “7. Radius” item, adjust so that the background color is completely defined.
 - ③ Using the “8. Soft” item, finely adjust the key signal boundary.
-

1. Basic operations

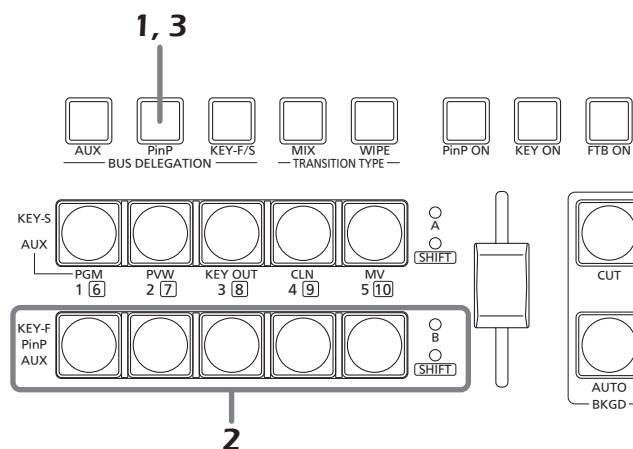
1-4. PinP (picture in picture)

This function involves combining another image with the background image.

1-4-1. Selecting the PinP material

Select the PinP material using the B bus crosspoint buttons.

- 1 Press the PinP button to establish the bus selection mode for the crosspoint buttons.**
The indicator of the PinP button blinks.
- 2 Select the PinP signal using the B bus crosspoint buttons.**
- 3 Press the PinP button to release the bus selection mode for the crosspoint buttons.**



1-4-2. PinP transition

When the PinP button is pressed, the PinP image transitions (fades in) for the transition duration which has been set.

<Setting the transition duration>

[1] TIME/CBGD Menu 2. PinP Time

- The transition duration can also be changed by turning the OSD/TIME dial while pressing the PinP button. When the PinP button is held down, the duration setting is displayed on the OSD menu so that the setting can now be changed while checking what is displayed.

The PinP transition can also be initiated by operating the slide lever.

<Selecting the slide lever operation>

[13] Operation Menu 7. Slide Lever

1. Basic operations

1-4-3. PinP settings

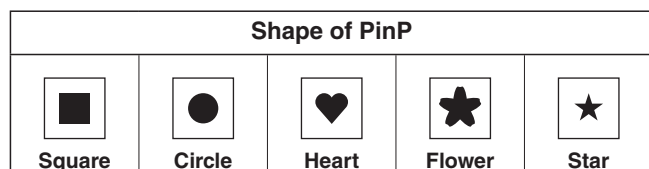
Settings can be selected for the PinP images.

[3] PinP Menu				
> 1. Shape	Square			
2. Pos:X/Y/Size	X	0.00	Y	0.0 S 25.0
3. PVW	Off			
4. Border/Soft	B	0.0	S	0.0
5. Set Border Col	White			
6. Adj Border Col	H	0.0	S	0.0 L 100.0
7. Trim Adjust1	Off	L	- T	-
8. Trim Adjust2	R	- B	-	
9. Set To Preset	1			

● Shape

[3] PinP Menu 1. Shape

This item enables any of the following shapes to be selected when combining the PinP image.

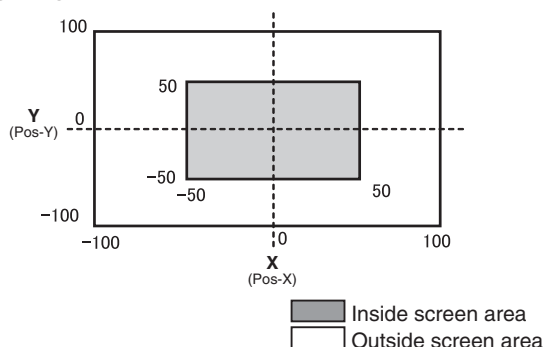


● Pos:X/Y/Size

[3] PinP Menu 2. Pos:X/Y/Size

This item is used to adjust the center position (X: X coordinate and Y: Y coordinate) and size (S) of the PinP image.

<Setting range of the X and Y coordinates>



- When the submenu [3] PinP Menu is displayed, direct operations using the USER buttons and OSD/TIME dial are enabled.

Refer to “2-5-6. Direct operations using the USER buttons and OSD/TIME dial” (<Basics> Operating Instructions).

<Direct operation status display>

U1: Pos-X (X coordinate), U2: Pos-Y (Y coordinate),
U3: Size, U4: —

Note

The size of the image cannot be changed when the Dot by Dot mode has been set for the PinP material.

● PVW

[3] PinP Menu 3. PVW

This item makes it possible to establish the setting for outputting the PinP image to the PVW image.

● Border Width

[3] PinP Menu 4. Border/Soft

[B: Border]

This is used to set the width of the PinP image border.

- Set “0.0” when the border effect is not going to be added.

[S: Soft]

This is used to set the amount of the PinP image’s soft effect.

● Set Border Col

[3] PinP Menu 5. Set Border Col

This item is used to select any of the following colors for the borders of the PinP image.

White, Yellow, Cyan, Green, Magenta, Red, Blue, Black

● Adj Border Col

[3] PinP Menu 6. Adj Border Col

This item is used to adjust the hue (H), saturation (S) and luminance (L) of the color which has been set for the borders of the PinP image.

1. Basic operations

● Trim Adjust1, Trim Adjust2

[3] PinP Menu
7. Trim Adjust1
8. Trim Adjust2

The method of trimming the PinP image and the area to be trimmed are set using the “7. Trim Adjust1” and “8. Trim Adjust2” items.

<Mode settings>

Off:

The image is not trimmed.

4:3:

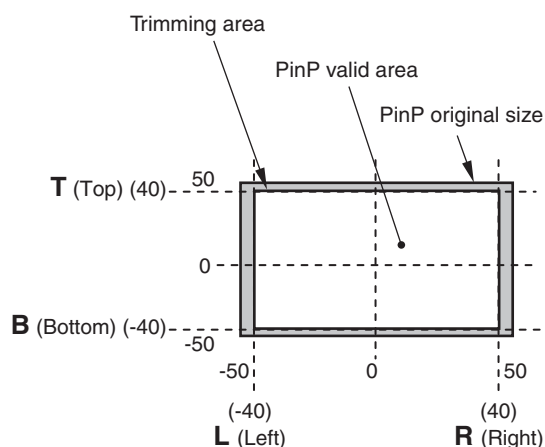
The image is automatically trimmed so that its aspect ratio is 4:3.

Manual:

The image is trimmed in the area which has been set using the “7. Trim Adjust1” and “8. Trim Adjust2” items.

<Area settings>

Set the values for left (L), top (T), right (R) and bottom (B) of the trimming area.



● Set To Preset

[3] PinP Menu
9. Set To Preset

Up to four sets of PinP image settings can be registered in the preset memories.

<Registering the settings in the preset memories>

Select 1, 2, 3 or 4, and press the OSD/TIME dial.

The status currently set is now registered in the selected preset number.

<What can be registered in the preset memories>

- Shape used when combining the images
- Image position (X, Y)
- Image size
- Border width
- Border color
- Soft effect amount
- Trimming setting

<Calling the preset memory settings>

What has been registered in the preset memories can be called using the USER buttons.

- Before any settings are registered or recalled, “PinP Preset” must be selected by operating the menu item below and the settings must be assigned to the USER buttons.

[12] USER/FMEM Menu
1. USER1

1. Basic operations

1-4-4. Transition between PinP materials

When a PinP bus material has been selected, the effect to be produced when images are switched can be executed as a MIX transition. (Bus transition function)

- When one material set to the Dot by Dot mode and another material have been switched, cut switching where the images change in an instant is performed.

[1] TIME/CBGD Menu 7. PinP BUS Trans

Set the transition duration, and set the bus transition function to “Enable” or “Disable”.

While the transition is underway, the indicator of the transition source button lights, and the indicator of the transition destination button blinks.

When the transition is completed, the indicator of the transition source button goes off, and the indicator of the transition destination button lights.

When another signal has been selected while a transition is underway, the processing for the transition will continue from the interim point.

1. Basic operations

1-4-5. Effect dissolve

This function enables one effect to be switched to another smoothly when the data in the preset memory where the PinP image settings were registered is called using the USER buttons.

- Before using the function, set the transition duration and either enable or disable for effect dissolve using the menu below.

[1] TIME/CBGD Menu 8. PinP EFFDSL

<Items covered by effect dissolve>

- Image position (X, Y)
- Image size
- Border width
- Border color
- Soft effect amount
- Trimming area setting
(Value which has been set in the Manual mode)

1-4-6. Selecting the Dot by Dot mode

When 1080/59.94i or 1080/50i has been selected as the unit's video format setting, the images of the SD format having the same frequency (480/59.94i or 576/50i) are selected as the PinP materials. These materials can also be combined in the Dot by Dot mode (actual size images). In this mode, the SD format images are not up-converted so image deterioration can be prevented.

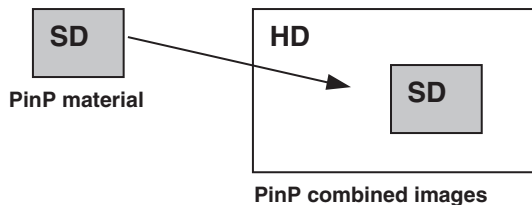
[10] Input Menu 1. Mode

Normal:

The input signals in conformity with the system format are enabled.

DbyD:

The images are combined in the Dot by Dot mode (actual size images).



1. Basic operations

1-5. FTB (fade to black)

Pressing the FTB ON button initiates fade-out from the program image to a black screen or fade-in from a black screen to the program image for the transition duration which has been set.

<Setting the transition duration>

[1] TIME/CBGD Menu
4. FTB Time

<Selecting the image>

[1] TIME/CBGD Menu
5. FTB Source

One of the following images can be selected to appear on the screen when fading out.

FMEM1, FMEM2, CBGD, White, Black

- The transition duration can also be changed by turning the OSD/TIME dial while pressing the FTB ON button. When the FTB ON button is held down, the duration setting is displayed on the OSD menu so the setting can now be changed while checking what is displayed.

1-6. Internal color signals

These signals allow the color of the background used by the bus to be set.

● CBGD Color

[1] TIME/CBGD Menu
9. Set CBGD Col

Any of the following colors can be selected for the background image.

White, Yellow, Cyan, Green, Magenta, Red, Blue, Black

● Color Adjust

[1] TIME/CBGD Menu
10. Adj CBGD Col

This item is used to adjust the hue (H), saturation (S) and luminance (L) of the color which has been set for the background image.

1. Basic operations

1-7. Switching the AUX output

1-7-1. Selecting the AUX bus material

The AUX output material is selected using the A bus and B bus crosspoint buttons.

- 1 Press the AUX button to set the crosspoint buttons to the AUX bus material selection mode.**

The indicator of the AUX button blinks.

- 2 Select the material using the A bus or B bus crosspoint buttons.**

[A bus crosspoint buttons]

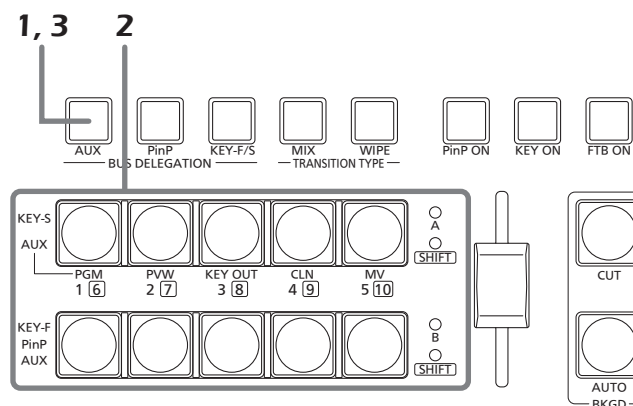
When buttons [1], [2], [3], [4] and [5] are pressed, PGM, PVW, KEY OUT, CLN or MV are selected, respectively.

[B bus crosspoint buttons]

When the buttons from [1] to [5] are pressed, the materials assigned to the corresponding XPT1 to XPT5 are selected.

When the button from [1] to [5] are pressed while the SHIFT button is held down, the materials assigned to the corresponding XPT6 to XPT10 are selected.

- 3 Press the AUX button to release the bus selection mode for the crosspoint buttons.**



1-7-2. Transitions between AUX materials

When an AUX bus material has been selected, the effect to be produced when images are switched can be executed as a MIX transition. (Bus transition function)

[1] TIME/CBGD Menu

6. AUX BUS Trans

Set the transition duration, and set the bus transition function to "Enable" or "Disable".

While the transition is underway, the indicator of the transition source button lights, and the indicator of the transition destination button blinks.

When the transition is completed, the indicator of the transition source button goes off, and the indicator of the transition destination button lights.

When another signal has been selected while a transition is underway, the processing for the transition will continue from the interim point.

1. Basic operations

1-8. Setting the USER buttons

Menu item functions can be assigned to the USER 1[3] button and USER 2[4] button for use later.
Up to four functions can be assigned from USER1 to USER4.

[12] USER/FMEM Menu	
> 1. USER1	PinP Preset
2. USER2	-
3. USER3	-
4. USER4	-
5. FMEM Select	FMEM1
6. AUX To FMEM	Rv:Off EX:ON
7. FMEM Mode	M:Auto EX:ON

The functions registered in [USER1] and [USER3] are assigned to the USER 1 button, and the functions registered in [USER2] and [USER4] are assigned to the USER 2 button.

While the SHIFT button is held down, the function registered in [USER3] or [USER4] can be selected.

The button indicator is lighted when the functions assigned to the button are enabled, and it is off when the functions are disabled.

Each time a USER button is pressed, its functions are switched between enabled and disabled.

The following functions can be assigned to the USER buttons (USER 1 and USER 2).

No.	Item	Function
1	PinP Preset	This item can be set in the [USER1] only. When it is set, [USER1] to [USER4] can all be used for calling the data in the PinP preset memories.
2	WIPE Preset	This item can be set in the [USER1] only. When it is set, [USER1] to [USER4] can all be used for calling the data in the WIPE preset memories.
3	PinP PVW	The PinP image is output to the PVW image.
4	KEY PVW	KEY is output to the PVW image.
5	GPI Input	The GPI input is enabled or disabled.
6	GPI Output	The GPI output is enabled or disabled.
7	CamCont Link	Link control with the AW-RP50 is set to ON or OFF.
8	AUX Transition	The AUX transitions are enabled or disabled.
9	PinP Transition	The PinP transitions are enabled or disabled.
10	EFFDSLVL	Effect dissolve is enabled or disabled.
11	StrFMEM1	The images of the AUX bus are imported into the frame memory (FMEM1).
12	StrFMEM2	The images of the AUX bus are imported into the frame memory (FMEM2).
13	No Assign	No item assigned

Even when functions have been assigned to the USER button, the assigned functions will be disabled in the following situations, and direct operations using the USER buttons and OSD/TIME dial will be enabled.

- When the chroma key marker is displayed
- When the submenu [2] WIPE Menu is displayed
- When the submenu [3] PinP Menu is displayed
- When the submenu [5] KEY Adjust Menu is displayed

Refer to “2-5-6. Direct operations using the USER buttons and OSD/TIME dial” (<Basics> Operating Instructions).

1. Basic operations

1-9. Frame memories

Still images can be stored in the unit's two internal frame memories for use later.

The still images are transferred to the frame memories from the AUX bus or computer.

- For details on the function for transferring data to and from a computer, refer to "6. Connections with a computer".

The images in the frame memories can be used as bus images by assigning FMEM1 and FMEM2 in the crosspoint buttons.

Refer to "1-1-3. Assigning signals to the crosspoint buttons".

In addition, the frame memory images can be used instead of the black screen with the FTB (fade to black) function.

The data for the images stored in the frame memories can be retained even when the power is turned off by saving it in the flash memory area which is incorporated inside the unit.

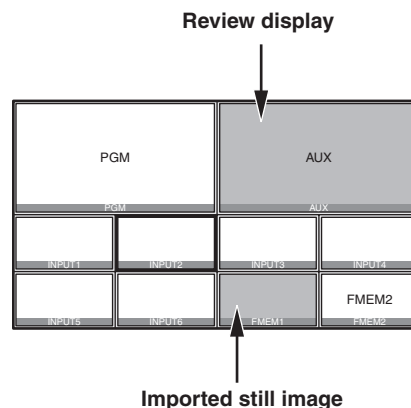
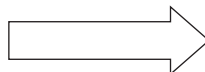
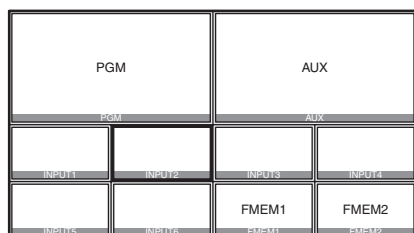
1-9-1. Transferring images from the AUX bus

The frame memory settings can be selected.

[12] USER/FMEM Menu	
1. USER1	PinP Preset
2. USER2	-
3. USER3	-
4. USER4	-
> 5. FMEM Select	FMEM1
6. AUX To FMEM	Rv:Off EX:ON
7. FMEM Mode	M:Auto EX:ON

[12] USER/FMEM Menu 5. FMEM Select

Select FMEM1 or FMEM2 as the number of the frame memory in which to store the images.



- Even when MV (multi view display) is selected by the AUX bus, the following information is not stored in the frame memory.

Multi view display frame, names of the materials, tally information, audio level meter

[12] USER/FMEM Menu 6. AUX To FMEM

Rv (Review):

This setting determines whether the review display is shown.

On: After an image has been imported, the image in the frame memory (FMEM1 or FMEM2) selected for the AUX bus is displayed for about 2 seconds. Even when the review display appears, the next image can be imported.

Off: The review display is not shown.

EX (Execute):

When the OSD/TIME dial is pressed, still images are imported into the frame memory.

1. Basic operations

1-9-2. Saving images in the flash memory

The data of the images stored in the frame memories can be retained even when the unit's power is turned off by saving it in the flash memory area which is incorporated inside the unit.

Whether to automatically save the image data stored in the frame memories or save it manually is set when the data is to be transferred from the AUX bus.

[12] USER/FMEM Menu 7. FMEM Mode

M (Mode):

This is used to set the method of storing the image data in the flash memory area.

Auto: The images are stored automatically.
Manu: The images are stored manually.

EX (Execute):

When the OSD/TIME dial is pressed, the image data in the frame memory is stored in the flash memory area.

- This takes effect when "Manu" has been selecting as the M (Mode) setting.

Note

When data is being written in the flash memory area, a message that the writing is underway is displayed on the OSD menu.

Do not turn off the power while this message is displayed.

2. Input/output signal settings

2-1. Input signal settings

The SDI IN 1 to SDI IN 4 connectors are the SDI signal input connectors, and the DVI IN connector is the DVI-D signal input connector.

A frame synchronizer is incorporated for each of the inputs so that asynchronous video signals can be selected with no accompanying shocks.

<List of settings by input signal>

Input connector	Setting menu items and sections in this manual				
	Mode	Name Type	Name	Freeze Select	Freeze
	2-1-1	2-1-2	2-1-3	2-1-4	2-1-5
SDI IN 1, SDI IN 2	✓	✓	✓	✓	✓
SDI IN 3, SDI IN 4	✓	✓	✓	✓	✓
DVI IN	—	✓	✓	—	✓

Input connector	Setting menu items and sections in this manual			
	VPrc	UC	DVI-IN scaling	DVI-IN information display
	2-1-6	2-1-7	2-1-8	2-1-9
SDI IN 1, SDI IN 2	✓	—	—	—
SDI IN 3, SDI IN 4	✓	✓	—	—
DVI IN	—	—	✓	✓

✓: Can be set; —: cannot be set

To set the input signals, display the [10] Input Menu using the OSD menu, and select the input signals.

[10] Input Menu	
> 1. SDI-IN1 (INPUT1)	
2. SDI-IN2 (INPUT2)	
3. SDI-IN3 (INPUT3)	
4. SDI-IN4 (INPUT4)	
5. DVI-IN (INPUT5)	

The display is switched to a menu display such as the one shown below by the input signals selected.

The menu title changes to “**Input Menu/Input Connectors (Material Names)**”.

The settings selected using the “4. Name Type” and “5. Name” items described below are displayed in the “(Material Names)” area.

SDI-IN1, SDI-IN2:

[10.1] Input Menu/SDI-IN1 (INPUT1)	
> 1. Mode	Normal
2. Freeze Select	Frame
3. Freeze	Off
4. Name Type	Default
5. Name	INPUT1
6. VPrc/YGain/Ped	Off Y - P -
7. VPrc:CGain/Hue	C - H -

SDI-IN3, SDI-IN4:

[10.3] Input Menu/SDI-IN3 (INPUT3)	
> 1. Mode	Normal
2. Freeze Select	Frame
3. Freeze	Off
4. Name Type	Default
5. Name	INPUT3
6. VPrc/YGain/Ped	Off Y - P -
7. VPrc:CGain/Hue	C - H -
8. UC:Scale/ECPos	- - -
9. UC:Size	S -
10. UC:Mvdet/Sharp	M - S -

DVI-IN:

[10.5] Input Menu/DVI-IN (INPUT5)	
1. Freeze	Off
2. Name Type	Default
3. Name	INPUT5
4. Scale	Fit-V
- - - - -<DVI-IN Status>- - - - -	
Size	-
H-Freq	-
V-Freq	-
Dot Clock	-

The settings of each menu item will now be described.

2. Input/output signal settings

2-1-1. Setting the input mode

[10.1] Input Menu/SDI-IN1
1. Mode

[10.2] Input Menu/SDI-IN2
1. Mode

[10.3] Input Menu/SDI-IN3
1. Mode

[10.4] Input Menu/SDI-IN4
1. Mode

“Normal” or “DbyD” can be set for the SDI-IN1 and SDI-IN2 connector signals.

An up-converter (UC) function is provided for the SDI-IN3 and SDI-IN4 connectors so “Normal”, “UC”, “DbyD” or “Auto” can be set for these connectors.

The mode is set for each input connector only when 1080/59.94i, 720/59.94p or 1080/50i has been selected as the unit's video format setting.

When any other video format has been selected, the “Normal” setting is always established.

Normal:

The input signals in conformity with the unit's video format take effect.

DbyD:

When SD signals with the same frame rate as the unit's video format have been input, they are input on a dot by dot (equal size) basis with no up-conversion. In this mode, there is minimal deterioration in the image quality and, as such, the mode is used to combine SD format materials using the PinP function.

- This mode can be set only when 1080i is used as the unit's video format.

UC:

When SD signals with the same frame rate as the unit's video format have been input, they are up-converted.

Auto:

The input signals in conformity with the unit's video format take effect.

Furthermore, if SD signals with the same frame rate as the video format are input when HD is selected as the video format, they are up-converted.

- In the Auto mode, the images may be disturbed when the input signals are switched.

2-1-2. Setting the material name type

[10.1] Input Menu/SDI-IN1
4. Name Type

[10.2] Input Menu/SDI-IN2
4. Name Type

[10.3] Input Menu/SDI-IN3
4. Name Type

[10.4] Input Menu/SDI-IN4
4. Name Type

[10.5] Input Menu/DVI-IN
2. Name Type

These items are for setting the type used when providing material names for the signals which are input to each connector.

Default:

The default settings (INPUT1 to INPUT5) are used.

Preset:

The material names provided ahead of time are used. The names are set using the “Name” item.

User:

A material name is set using up to 10 characters. The actual material names are set using the “Name” item.

CAM Name:

When an IP connection is established with the AW-RP50, the remote camera names captured by the AW-RP50 are set as the material names.

2. Input/output signal settings

2-1-3. Setting the material names

[10.1] Input Menu/SDI-IN1
5. Name

[10.2] Input Menu/SDI-IN2
5. Name

[10.3] Input Menu/SDI-IN3
5. Name

[10.4] Input Menu/SDI-IN4
5. Name

[10.5] Input Menu/DVI-IN
3. Name

These are used to set the material names.

Material names can be set when “Preset” or “User” has been selected as the material name type setting.

- The material names are merely displayed (they cannot be set) when “Default” or “CAM Name” has been selected as the material name type setting.

When “Preset” is selected

The materials names are set using the “type + number” format.

Type: CAM, C, CG, CGV, CGK, PC, V, VTR, VCR

Numbers: 1 to 9

When “Preset” is selected as the material name type setting, the “Name” item will be displayed as shown below.

3. Name >CG | 1

How to set the material names:

Press the OSD/TIME dial, and move the blinking part to the position where the material type is to be selected.

Turn the OSD/TIME dial to select the material type.

Press the OSD/TIME dial to move the blinking part to the position where the number is to be selected. Turn the OSD/TIME dial to select the number.

When “User” is selected

Any material names consisting of not more than 10 characters (alphanumerics and symbols which can be expressed in ASCII codes) can be set.

When “User” is selected as the material name type setting, the “Name” item will be displayed as shown below.

3. Name >

How to set the material names:

Material names are set one character at a time.

Turn the OSD/TIME dial to move the blinking part to the character input position, and press the OSD/TIME dial.

Next, turn the OSD/TIME dial to select the character, and press the OSD/TIME dial to enter the selection.

2-1-4. Setting the freeze method

[10.1] Input Menu/SDI-IN1
2. Freeze Select

[10.2] Input Menu/SDI-IN2
2. Freeze Select

[10.3] Input Menu/SDI-IN3
2. Freeze Select

[10.4] Input Menu/SDI-IN4
2. Freeze Select

These are used to select the increment in which the SDI input signal images are to be frozen (turned into still images).

Frame:

The images are frozen in 1-frame increments.

Field:

The images are frozen in 1-field increments.

This is used when freezing moving images.

With interlace signals, however, diagonal lines and moving parts appear jagged.

2. Input/output signal settings

2-1-5. Freezing and canceling the freezing of the input images

[10.1] Input Menu/SDI-IN1
3. Freeze

[10.2] Input Menu/SDI-IN2
3. Freeze

[10.3] Input Menu/SDI-IN3
3. Freeze

[10.4] Input Menu/SDI-IN4
3. Freeze

[10.5] Input Menu/DVI-IN
1. Freeze

These are used to freeze the input signal images or cancel the freezing of these images.

On: The images are frozen.

Off: The image freezing is canceled.

- When the multi view display is used to show the input signals of frozen images, the "F" mark appears in front of the material names.

2-1-6. Setting the video process function

The video process function works for all the SDI input signal images.

The color tones can be changed on an image by image basis.

The "VPrc:YGain/Ped" and "VPrc:CGain/Hue" items are used to change them.

VPrc:YGain/Ped	VPrc	This is used to enable or disable the video process function. On: Function enabled Off: Function disabled
	YGain	This is used to set the gain of the Y signal. 0.0 to 200.0
	Ped	This is used to set the pedestal level value. -20.0 to 20.0
VPrc:CGain/Hue	CGain	This is used to set the gain value of the saturation. 0.0 to 200.0
	Hue	This is used to set the amount of change in the hue. 0.0 to 359.9

2-1-7. Setting the up-converter

This unit features an up-converter function.

The up-converter is set on the SDI-IN3 and SDI-IN4 menus.

[10.3] Input Menu/SDI-IN3
8. UC:Scale/ECPos

[10.4] Input Menu/SDI-IN4
8. UC:Scale/ECPos

Scale: "SQ," "EC" or "LB" is set as the scaling method.



Input image	SQ	EC	LB
SQ (squeeze)	The image is enlarged both horizontally and vertically to fill the entire screen.		
EC (edge crop)	The aspect ratio of the image is maintained, the image size is increased in accordance with the vertical resolution, and black bands are added at the left and right.		
LB (letter box)	The aspect ratio of the image is maintained, the image size is increased in accordance with the horizontal resolution, and the image is cropped at the top and bottom.		

ECPos: The image position is finely adjusted.

This can be set only when "EC" (edge crop) has been selected as the Scale setting.

Center	The image is positioned in the center, and black images are added at the left and right.
Right	The image is positioned at the right, and a black image is added at the left.
Left	The image is positioned at the left, and a black image is added at the right.

[10.3] Input Menu/SDI-IN3
9. UC:Size

[10.4] Input Menu/SDI-IN4
9. UC:Size

The size of the up-converted input image is adjusted using a percentage from 100 % to 110 %.

2. Input/output signal settings

[10.3] Input Menu/SDI-IN3 10. UC:Mvdet/Sharp

[10.4] Input Menu/SDI-IN4 10. UC:Mvdet/Sharp

Mvdet: This is used to set the motion detection sensitivity of the image.

1 ← 2 ← 3 ← 4 ← 5
Toward still images Standard Toward moving images

Sharp: This is used to enhance the sharpness of the image edges.

1 ← 2 ← 3 ← 4 ← 5
Not sharp edges Standard Very sharp edges

2-1-8. Setting the input image scaling

[10.5] Input Menu/DVI-IN 4. Scale

This is used to set the scaling for the DVI-D input signal images.

Listed below are the resolutions of the images which can be input.

Resolutions supported

XGA	1024 × 768/60 Hz
WXGA	1280 × 768/60 Hz
SXGA	1280 × 1024/60 Hz
WSXGA+	1680 × 1050/60 Hz
UXGA	1600 × 1200/60 Hz
WUXGA	1920 × 1200/60 Hz
1080/59.94p	1920 × 1080/59.94 Hz
1080/50p	1920 × 1080/50 Hz

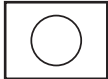
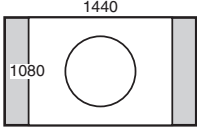
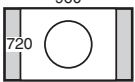
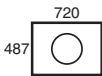
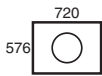
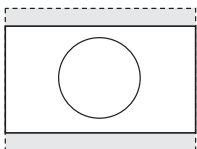
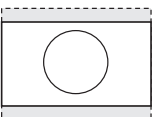
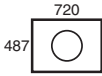
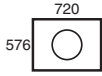
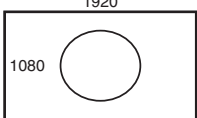
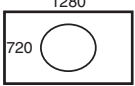
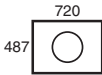
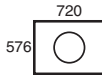
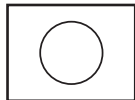
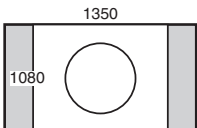
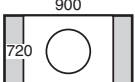
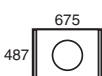
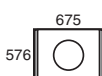
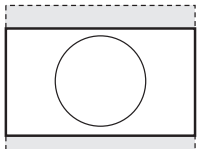
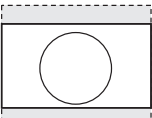
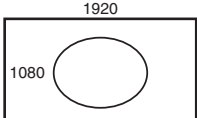
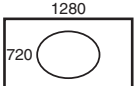
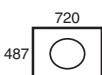
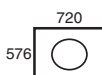
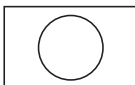
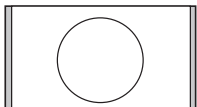
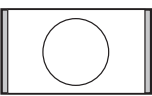
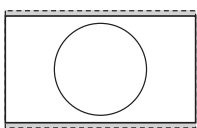
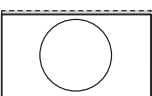
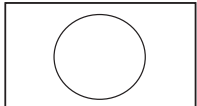
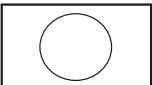
Select the scaling method from among the options listed below.

Fit-V	The aspect ratio of the input image is maintained, and the size of the image is enlarged or reduced in accordance with the vertical resolution.
Fit-H	The aspect ratio of the input image is maintained, and the size of the image is enlarged or reduced in accordance with the horizontal resolution.
FULL	The size of the image is enlarged or reduced in accordance with the system resolution. • The aspect ratio of the image is not maintained. • The enlargement and reduction ratios differ between the horizontal and vertical directions.

- For details on which sizes are supported for which formats, refer to “Table of DVI input scaling sizes” on the next page.

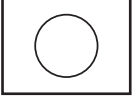
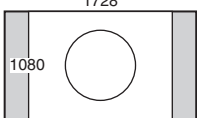
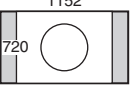
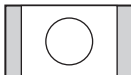
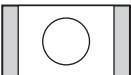
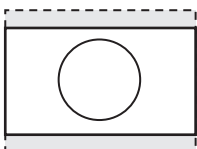
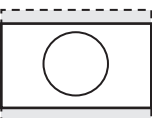
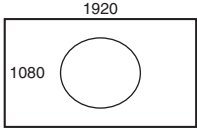
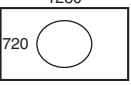
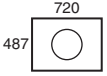
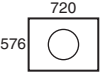
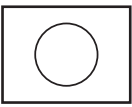
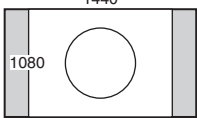
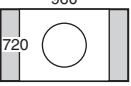
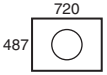
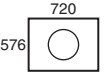
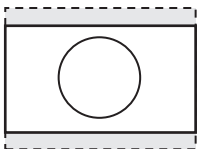
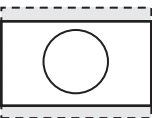
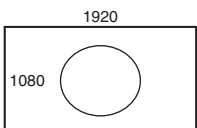
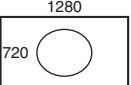
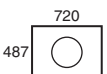
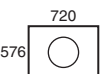
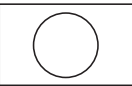
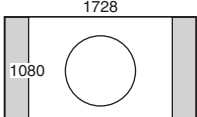
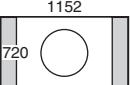
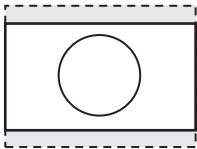
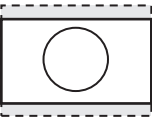
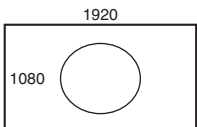
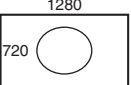
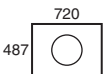
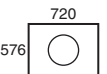
2. Input/output signal settings

● Table of DVI input scaling sizes

DVI format	Mode	HD/1080i	HD/720P	SD/NTSC	SD/PAL
		1920 × 1080	1280 × 720	720 × 487	720 × 576
XGA 1024 × 768 	Fit-V				
	Fit-H				
	FULL				
SXGA 1280 × 1024 	Fit-V				
	Fit-H				
	FULL				
WXGA 1280 × 768 	Fit-V				
	Fit-H				
	FULL				

 : Black images are inserted into these areas.
 : Parts of images protruding in these areas are cropped.

2. Input/output signal settings

DVI format	Mode	HD/1080i	HD/720P	SD/NTSC	SD/PAL
		1920 × 1080	1280 × 720	720 × 487	720 × 576
WSXGA+ 1680 × 1050 	Fit-V				
	Fit-H				
	FULL				
UXGA 1600 × 1200 	Fit-V				
	Fit-H				
	FULL				
WUXGA 1920 × 1200 	Fit-V				
	Fit-H				
	FULL				

 : Black images are inserted into these areas.
 : Parts of images protruding in these areas are cropped.

2. Input/output signal settings

2-1-9. Displaying the input image information

[10.5] Input Menu/DVI-IN
Size

[10.5] Input Menu/DVI-IN
H-Freq

[10.5] Input Menu/DVI-IN
V-Freq

[10.5] Input Menu/DVI-IN
Dot Clock

These are used to display the information concerning the DVI-D input signal images.
The information cannot be changed.

Size:

This indicates the pixel count of the images.

H-Freq:

This indicates the horizontal frequency of the images.

V-Freq:

This indicates the vertical frequency of the images.

Dot Clock:

This indicates the dot clock frequency of the images.

The formats supported are listed below.

<DVI-D formats supported>

Input video signal			Dot clock frequency (MHz)	Frequency	
				Horizontal (kHz)	Vertical (Hz)
XGA	1024 × 768	Digital	65.0	48.36	60.00
WXGA	1280 × 768	Digital	79.5	47.78	59.87
SXGA	1280 × 1024	Digital	108.0	63.98	60.02
WSXGA+	1680 × 1050	Digital	148.3	65.29	59.95
WUXGA	1920 × 1200	Digital	154.0	74.04	59.95
UXGA	1600 × 1200	Digital	162.0	75.00	60.00
1080/50p	1920 × 1080	Digital (RGB)	148.5	56.25	50.00
1080/59.94p	1920 × 1080	Digital (RGB)	148.5/1.001	67.50/1.001	60.00/1.001

- If the format of the input signals is not supported, it may not be possible to import the signals properly, and a black image or disturbed image may appear.

2. Input/output signal settings

2-2. Setting the output signals

Signals can be output from the three connectors: SDI OUT 1, SDI OUT 2 and DVI-D OUT.

The output signals are set on the [11] Output Menu of the OSD menu.

[11] Output Menu		
>	1. SDI-OUT1	PGM
	2. SDI-OUT2	PVW
	3. DVI-OUT	AUX
	4. SDI-OUT:Limit	Off
	5. DVI-OUT:Size	*Auto
	6. DVI-OUT:Scale	Fit-V
	7. DVI-OUT:Mvdet	3

2-2-1. Assigning the output signals

[11] Output Menu
1. SDI-OUT1

[11] Output Menu
2. SDI-OUT2

[11] Output Menu
3. DVI-OUT

The following assignment options are available.

PGM	This is the main line output of the switcher. Images with wipe, mix, key, PinP or other effects added are output.
PVW	The PVW images which enable the next operation to be checked are output.
CLN	Clean signals (images resulting when the key and PinP effects have been removed from the PGM signal) are output.
AUX	The signal selected using the AUX bus is output.
MV	The multi view display signal is output.
KEY OUT	The key signal is output.

Note

The multi view display frames are not displayed in what is output from the SDI OUT 1 connector (SDI-OUT1).

2-2-2. Setting the color areas

[11] Output Menu
4. SDI-OUT:Limit

This is used to set the color area for the SDI output signal images.

Off	The color area is not subject to any limitations.
108	The amplitude level of each of the colors (R, G, B) is limited to between 0 % and 108 %.
104	The amplitude level of each of the colors (R, G, B) is limited to between 0 % and 104 %.
100	The amplitude level of each of the colors (R, G, B) is limited to between 0 % and 100 %.

2-2-3. Setting the DVI-D output signals

The following setting is selected for DVI-D output signal images.

[11] Output Menu
5. DVI-OUT:Size

This is used to set the resolution to be output. The following resolutions are supported.

Supported resolutions

Auto	Using the DVI signals, the information of the device at the output destination is gathered, and the images are output at the optimum resolution. The vertical frequency is set to 60 Hz, and the maximum resolution is WUXGA.
XGA	1024 × 768
WXGA	1280 × 768
SXGA	1280 × 1024
WSXGA+	1680 × 1050
UXGA	1600 × 1200
WUXGA	1920 × 1200
1080/59.94p	1920 × 1080
1080/50p	1920 × 1080

2. Input/output signal settings

[11] Output Menu 6. DVI-OUT:Scale

This is used to select one of the scaling methods listed below.

Fit-V	The aspect ratio of the output image is maintained, and the size of the image is enlarged or reduced in accordance with the vertical resolution. • Black images are inserted into areas where there are no images. • Parts of images that protrude are cropped.
Fit-H	The aspect ratio of the output image is maintained, and the size of the image is enlarged or reduced in accordance with the horizontal resolution. • Black images are inserted into areas where there are no images. • Parts of images that protrude are cropped.
FULL	The size of the output image is enlarged or reduced in accordance with the system resolution. • The aspect ratio of the image is not maintained. • The enlargement and reduction ratios differ between the horizontal and vertical directions.

[11] Output Menu 7. DVI-OUT:Mvdet

This is used to set the sensitivity with which the motion of moving images is to be detected.

1 ← → 2 ← → 3 ← → 4 ← → 5
Toward still images Standard Toward moving images

3. Setting the multi view display

The screen of an external monitor can be split into a number of sections, and images such as input images and program image can be positioned in the sections and displayed.

3-1. Screen layout

The multi view display layout is set using the [7] MultiView Pattern Menu of the OSD menu.

[7] MultiView Pattern Menu	
> 1. Split	10-aSplit
2. Pos1 Source	PGM
3. Pos2 Source	PVW
4. Pos3 Source	SDI-IN1 (INPUT1)
5. Pos4 Source	SDI-IN2 (INPUT2)
6. Pos5 Source	SDI-IN3 (INPUT3)
7. Pos6 Source	SDI-IN4 (INPUT4)
8. Pos7 Source	DVI-IN (INPUT5)
9. Pos8 Source	FMEM1
10. Pos9 Source	FMEM2
11. Pos10 Source	AUX

[7] MultiView Pattern Menu

1. Split

The following eight options are available as split screen layouts.

4Split	5-aSplit	5-bSplit	6-aSplit
6-bSplit	9Split	10-aSplit	10-bSplit

[7] MultiView Pattern Menu

2. Pos1 Source

to

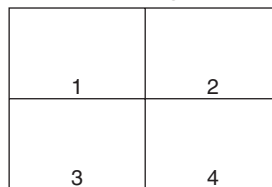
11. Pos10 Source

This is used to set the signals to be displayed in split screens 1 to 10.

SDI-IN1 to 4 (material names)		DVI-IN (material names)	
CBGD	FMEM1	FMEM2	PGM
PVW		KEY OUT	AUX

- Depending on the setting selected for the "1. Split" item, the "6. Pos5 Source" to "11. Pos10 Source" items may not be displayed.

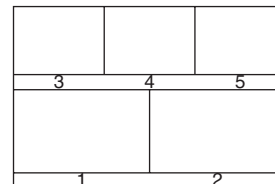
<Split screen layouts>



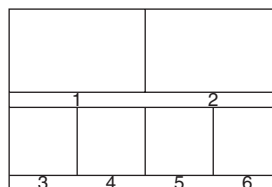
4Split



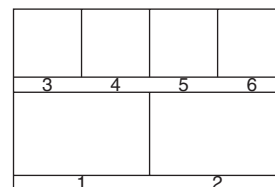
5-aSplit



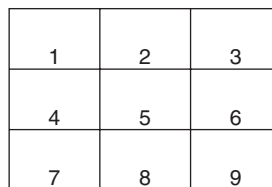
5-bSplit



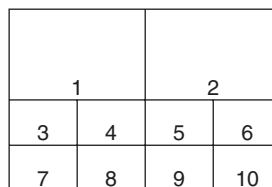
6-aSplit



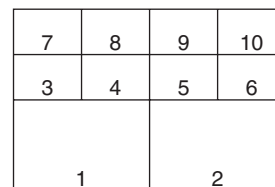
6-bSplit



9Split



10-aSplit



10-bSplit

3. Setting the multi view display

3-2. Setting the split frames and characters

The frames, character luminance and background to be used for the split screens can be set.
The settings are selected on the [8] MultiView Out/Frame Menu of the OSD menu.

[8] MultiView Out/Frame Menu		
>	1. Frame	LUM 75%
	2. Character	LUM 75%
	3. Label	On
	4. Tally	Red+Green
	5. Level Meter	Off
	6. Input Satus	On

Note

If parts of the OSD menus overlap the multi view display frame, the split screen frames and characters will not be displayed.

[8] MultiView Out/Frame Menu

1. Frame

This is used to set the split frame brightness and, if the frame is to be displayed, to decide whether the split frames are to be displayed.

LUM (0%, 25%, 50%, 75%, 100%):

The split frame (gray scale) luminance is set.

Off:

The split frame is not displayed.

[8] MultiView Out/Frame Menu

2. Character

This is used to set the character brightness and, if the frame is to be displayed, decide whether the characters are to be displayed.

LUM (0%, 25%, 50%, 75%, 100%):

The character (gray scale) luminance is set.

Off:

The characters are not displayed.

[8] MultiView Out/Frame Menu

3. Label

This is used to decide whether to display the character background (half tones).

On: The character background is displayed.

Off: The character background is not displayed.

3-3. Setting the tally displays

The tally displays to be superimposed onto the split screen frames can be set.

The red tally indicates the material consisting of program outputs.

The green tally indicates the material selected by the PST bus.

If frames are displayed, the red tally or green tally is displayed on the frames.

If the frames are not displayed, the red tally or green tally are displayed on the left and right of the material names.

[8] MultiView Out/Frame Menu

4. Tally

This is used to set the tally displays.

Red+Green:

Both the red tally and green tally are displayed.

Red: Only the red tally is displayed.

Off: No tally displays are shown.

- The red tally signals are output from the unit's TALLY/GPI connector.
- The red tally is not displayed during FTB operations while the program images have been completely faded out to a black screen.

During times like this, the green tally is displayed for images consisting of program images.

However, the red tally will be displayed if FMEM1, FMEM2 or CBGD has been selected using the menu item below.

[1] TIME/CBGD Menu

5. FTB Source

3. Setting the multi view display

3-4. Setting the level meters

Level meters for the embedded audio signals transferred by the SDI input can be displayed on the split screens.

Left display:

Channel 1 of group 1

Right display:

Channel 2 of group 1

[8] MultiView Out/Frame Menu

5. Level Meter

On: The level meters are displayed.

Off: The level meters are not displayed.

3-5. Setting the input signal marks

The status of the input signals can be displayed in front of the material names displayed on the split screens.

“F” mark:

This appears when the input signals are frozen.

“ ! ” mark:

This appears when there are no input signals.

Camera icon “”:

This appears when the signals from a remote camera controlled by the AW-RP50 are input.

- It appears only when the unit and the AW-RP50 are linked.

[8] MultiView Out/Frame Menu

6. Input Status

On: The input signal status is displayed.

Off: The input signal status is not displayed.

4. System settings

4-1. System menu settings

4-1-1. Setting the video format

The unit's video format can be set.

[14] SYSTEM Menu				
> 1. Format	*1080/59.94i			
2. HiResMV	-			
3. 16:9SQ	-			
4. AUX Anci	Off			
5. PGM Anci	Off			
6. PVW Anci	Off			
7. MV Anci	Off			
8. Initial	No			
9. IP Address	192.	168.	0.	8
10. Subnet Mask	255.	255.	255.	0
11. Gateway	192.	168.	0.	1

Note

The [14] SYSTEM Menu settings cannot be changed if "Locked" has been set using the menu item below.

[13] Operation Menu
11. SYSTEM Menu

[14] SYSTEM Menu 1. Format

Select the supported format from among the options provided below.

Supported formats

1080/59.94i	1080/50i
720/59.94p	720/50p
1080/24PsF	1080/23.98PsF
480/59.94i	576/50i

<How to specify the video format and then start the system>

With the unit in the power-off status, the video format can be specified and the system started.

Set the POWER switch to ON while holding down one combination of the buttons listed below that corresponds to the video format.

Button to press at the same time	Video format
[OSD ON] + A bus crosspoint [1]	1080/59.94i
[OSD ON] + A bus crosspoint [2]	1080/50i
[OSD ON] + A bus crosspoint [3]	720/59.94p
[OSD ON] + A bus crosspoint [4]	720/50p
[OSD ON] + A bus crosspoint [5]	1080/24PsF
[OSD ON] + B bus crosspoint [1]	1080/23.98PsF
[OSD ON] + B bus crosspoint [2]	480/59.94i
[OSD ON] + B bus crosspoint [3]	576/50i

- After the POWER switch has been set to ON, keep holding down the buttons until an image is output.

[14] SYSTEM Menu 2. HiResMV

This is used to decide whether to set the high-resolution multi view mode.

When an SD video format (480/59.94i or 576/50i) has been selected for the unit, the images can be output at high resolution to the DVI-D output.

If this is the case, the multi view display is set for the DVI OUT connector output.

The multi view display cannot be set for the SDI OUT connector output.

On: The high-resolution multi view mode is enabled.

Off: The high-resolution multi view mode is disabled.

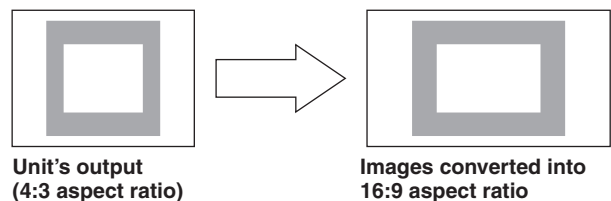
[14] SYSTEM Menu 3. 16:9SQ

This is used to set the 16:9 squeeze mode.

It can be set when an SD video format (480/59.94i or 576/50i) has been selected for the unit.

When adjusting the wipe and PinP border width, bear in mind that the SD format images that are output from the unit will be converted into the 16:9 aspect ratio and used.

<Border width when the 16:9SQ mode has been enabled (graphical representation)>



4. System settings

4-1-2. Setting the ancillary data and embedded audio data

A function for allowing the V ancillary data and embedded audio data of the SDI input signals to pass through can be set.

When an HD format is used:

The ancillary data starting with line 9 is allowed to pass through.

When an SD format is used:

The ancillary data starting with line 12 is allowed to pass through.

- When 1080/59.94i, 720/59.94p or 1080/50i has been selected as the unit's video format setting, it is not possible to allow the ancillary data and embedded audio data to pass through even if SD format signals (480/59.94i or 576/50i) have been input in the Dot by Dot mode or up-converter (UC) mode.
☞ Refer to "2-1-1. Setting the input mode".

[14] SYSTEM Menu 4. AUX Anci

On or Off is selected here as the setting for the AUX output signals.

- On:** The ancillary data and embedded audio data of the SDI input materials selected by the AUX bus are allowed to pass through.
- Off:** The ancillary data and embedded audio data are not allowed to pass through.
- The data is not allowed to pass through when KEY OUT or CLN material has been selected.

[14] SYSTEM Menu 5. PGM Anci

On or Off is selected here as the setting for the program output signals.

- On:** The ancillary data and embedded audio data of the SDI input materials selected by the PGM bus are allowed to pass through.
- Off:** The ancillary data and embedded audio data are not allowed to pass through.

[14] SYSTEM Menu 6. PVW Anci

On or Off is selected here as the setting for the PVW output signals.

- On:** The ancillary data and embedded audio data of the SDI input materials selected by the PST bus are allowed to pass through.
- Off:** The ancillary data and embedded audio data are not allowed to pass through.

[14] SYSTEM Menu 7. MV Anci

PGM, PVW or Off is selected here as the setting for the output signals of the multi view display.

- PGM:** The ancillary data and embedded audio data of the SDI input materials selected by the PGM bus are allowed to pass through.
- PVW:** The ancillary data and embedded audio data of the SDI input materials selected by the PST bus are allowed to pass through.
- Off:** The ancillary data and embedded audio data are not allowed to pass through.

Note

The sounds generated when the video signals are switched will be added to the embedded audio data which is output from the unit.

4. System settings

4-1-3. System initialization

[14] SYSTEM Menu 8. Initial

Select “Yes” and press the OSD/TIME dial, the setting data is returned to the initial values.

- However, the video format settings and the network settings will not be initialized.

4-1-4. Network settings

The network settings for upgrading the software versions and other data can be selected.

[14] SYSTEM Menu 9. IP Address

This is used to set the IP address.

Initial value: 192.168.0.8

[14] SYSTEM Menu 10. Subnet Mask

This is used to set the subnet mask.

Initial value: 255.255.255.0

[14] SYSTEM Menu 11. Gateway

This is used to set the gateway.

Initial value: 192.168.0.1

Notes

- For the network settings to take effect, the unit must be rebooted. Turn off the power, and then turn it back on.
- When the same IP address as the IP address of another device or an illegal IP address is set, the unit may return an error when the IP address setting is selected or the unit or other device may not operate properly.
Consult the network administrator before setting the IP address.

4. System settings

4-2. Operation menu settings

4-2-1. OSD (on-screen display) settings

The menu screens can be superimposed onto the images output from the SDI OUT 2 connector and DVI OUT connector, and displayed.

[13] Operation Menu	
> 1. OSD OUT	SDI-OUT2+DVI-OUT
2. OSD Size	FULL
3. OSD Back	On
4. Key Priority	PinP over KEY
5. Bus Mode	PGM(A)/PST(B)
6. Time Unit	Sec
7. Slide Lever	BKGD
8. GPI Input	Enable
9. GPI Output	Enable
10. CamCont Link	Off
11. SYSTEM Menu	Unlocked

[13] Operation Menu 1. OSD OUT

Select the connector to be used for outputting the OSD displays from the options listed below.

SDI-OUT2
DVI-OUT
SDI-OUT2+DVI-OUT

- The SDI OUT2+DVI-OUT option is selected when the OSD ON button is pressed while the SHIFT button is held down.

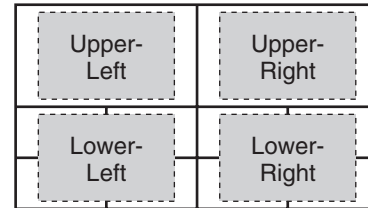
When this is done, "Auto" is selected as the following menu setting.

[11] Output Menu 5. DVI-OUT:Size

[13] Operation Menu 2. OSD Size

The OSD size and position can be selected from the options listed below.

FULL	Full size of screen
Upper-Left Upper-Right Lower-Right Lower-Left	As shown in the figure below, the menu appears in one-fourth of the full size of the screen, and it is positioned in one of the four quadrants.



- If the frame of the OSD overlaps the multi view display frames, the frame displays will be hidden.

[13] Operation Menu 3. OSD Back

On: A black background is displayed for the OSD.

Off: A black background is not displayed for the OSD.

4. System settings

4-2-2. Other settings

[13] Operation Menu 4. Key Priority

Refer to “1-3. KEY”.

[13] Operation Menu 5. Bus Mode

Refer to “1-1-4. Selecting the bus mode”.

[13] Operation Menu 6. Time Unit

Refer to “1-1-7. Auto transition”.

[13] Operation Menu 7. Slide Lever

Refer to “1-1-6. Manual transitions”.

[13] Operation Menu 8. GPI Input

This is used to enable or disable control from the GPI input port.

Enable: Control is enabled.

Disable: Control is disabled.

- For details on what is controlled, refer to “5-2. TALLY/GPI”.

[13] Operation Menu 9. GPI Output

This is used to enable or disable control from the GPI output port.

Enable: Control is enabled.

Disable: Control is disabled.

- For details on what is controlled, refer to “5-2. TALLY/GPI”.

[13] Operation Menu 10. CamCont Link

This is used to set the link function with the AW-RP50 to ON or OFF.

On: Link function is set to ON.

Off: Link function is set to OFF.

- Refer to “7. Function for linking up with the remote camera controller”.

[13] Operation Menu 11. SYSTEM Menu

When “Locked” is selected as this item’s setting, it is not possible to change the [14] SYSTEM Menu settings. Select this setting when it is not desirable for the [14] SYSTEM Menu settings to be changed easily.

4. System settings

4-2-3. Bus status displays

When the A bus or B bus crosspoint buttons are held down, the BUS Assign Status menu appears for the OSD menu.

BUS Assign Status	
XPT SW	1
XPT SW Assign	SDI-IN1 (INPUT1)

PGM	SDI-IN1 (INPUT1)
PVW	SDI-IN2 (INPUT2)
AUX	MV
PinP	SDI-IN1 (INPUT1)
KEY Fill	CBGD
KEY Source	FMEM1

4-2-4. Version displays

The numbers of the versions are displayed on the [15] SYSTEM Status of the OSD menu.

[15] SYSTEM Status	
SYSTEM Ver.	*, **, **
SOFT Ver.	****
GLUE FPGA Ver.	****
MAIN FPGA Ver.	****
FONT Ver.	****
MAC Address	**--**--**--**--**
FAN	NoAlarm
Power	NoAlarm
Temperature	NoAlarm

[15] SYSTEM Status

SYSTEM Ver.

The system version information is displayed here.

[15] SYSTEM Status

SOFT Ver.

The unit's software version is displayed here.

[15] SYSTEM Status

GLUE FPGA Ver.

The version of the hardware used to start the unit is displayed here.

[15] SYSTEM Status

MAIN FPGA Ver.

The version of the hardware that processes the images is displayed here.

[15] SYSTEM Status

FONT Ver.

The version of the font used for the OSD menu is displayed here.

[15] SYSTEM Status

MAC Address

The MAC address is displayed.

[15] SYSTEM Status

FAN

This displays "Alarm" when something is wrong with the cooling fan.

[15] SYSTEM Status

Power

This displays "Alarm" when a drop in the supply voltage has been detected.

[15] SYSTEM Status

Temperature

This displays "Alarm" when the temperature inside the unit has risen.

If an alarm has occurred, stop using the unit immediately, and be sure to contact your dealer. Continuing to use the unit in this condition could damage it.

5. External device control interfaces

5-1. LAN connection

Use LAN cables to connect the AW-HE50, AW-RP50 and host computer.

When connecting the unit directly to another device, use a crossover cable.

For network connections via a device such as a hub (switching hub), use straight cables.

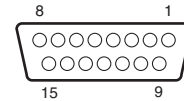
When a hub is not going to be used, ensure that the length of the LAN cable does not exceed 100 meters [328 ft.] (when a cable of category 5 or above is used).

- For further details on the AW-HE50 and AW-RP50 connections and settings, refer to “2-2-2. Example of connections” (<Basics> Operating Instructions).
- For details on the functions available when connection has been made to the host computer, refer to “6. Connections with a computer”.

5-2. TALLY/GPI

The TALLY/GPI connector features five contact input ports for controlling the unit from an external device and seven open collector output ports for outputting the tally and status information from the unit to an external device.

(D-sub 15-pin, female, inch thread)



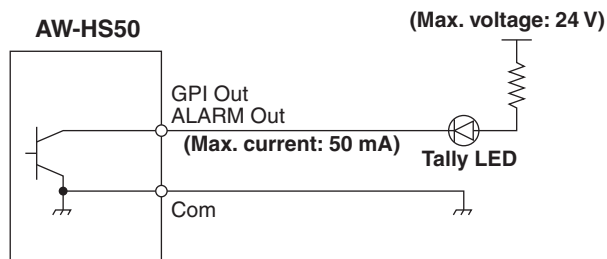
Pin No.	Signal	Input/output	Details of signal	Operation
1	TALLY OUT1	Open collector output	Tally output of input image 1	A low-level signal is output during tally output.
2	TALLY OUT2	Open collector output	Tally output of input image 2	
3	TALLY OUT3	Open collector output	Tally output of input image 3	
4	TALLY OUT4	Open collector output	Tally output of input image 4	
5	TALLY OUT5	Open collector output	Tally output of input image 5	
6	ALARM	Open collector output	Fan alarm or power alarm output	A low-level signal is output when trouble has occurred.
7	KEY ON	Open collector output	Key combination status output	A low level is output during key combinations.
8	(RESERVE)	Contact input	(Reserve)	
9	NC		Not used	
10	Tally Disable	Contact input	Tally signal enable/disable	This signal is enabled by the contact input (and disabled when open).
11	AUTO	Contact input	AUTO button of transition part	The signal is made operational by the contact input (30 ms or more).
12	CUT	Contact input	CUT button of transition part	
13	KeyON	Contact input	KEY ON button of transition part	
14	PinPON	Contact input	PinP button of transition part	
15	GND	Ground	Ground	

Example of an open collector output connection

Ensure that the conditions given below are satisfied.

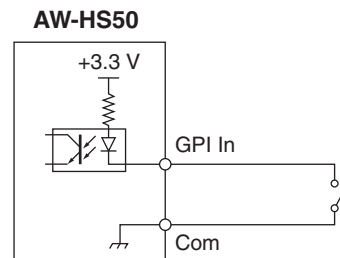
Dielectric strength: Max. DC 24 V

Current: Max. 50 mA



Example of a contact input connection

Provide contact inputs.



6. Connections with a computer

6-1. Data transmission functions

When the unit and computer are connected using a LAN cable, the unit's data can be saved in (downloaded to) the computer and data can be written (uploaded) from the computer to the unit.

The following kinds of data can be downloaded and uploaded.

- Frame memory images (FMEM1, FMEM2)
- Menu settings
- Panel statuses

- Network information (IP address, subnet mask, gateway and MAC address) cannot be uploaded.
- The image formats compatible with the frame memories include bitmap (bmp), JPEG (jpg), TIFF (tif), GIF (gif) and PNG (png).

Images can be converted automatically to the size of the format specified.

In order to use this function, the "Data transmission software" must be installed into the host computer from the CD-ROM provided.

For details on how to install the application, refer to "6-3. How to install the software".

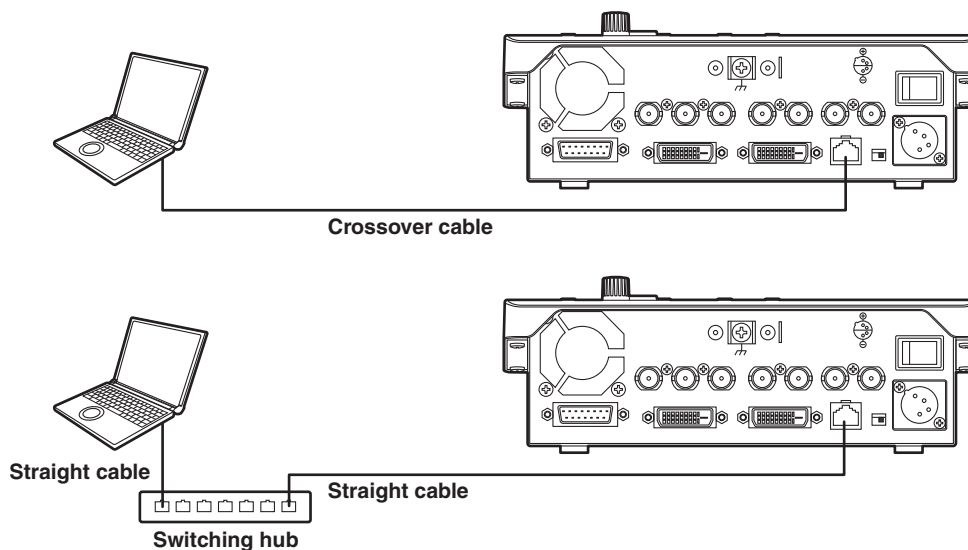
6-2. Connections

A LAN cable is used to connect the host computer to the unit's LAN connector.

When connecting the unit directly to the host computer, use a crossover cable.

When making the connection through a device such as a hub (switching hub), use a straight cable.

For details on the IP address and other network settings, refer to "4-1-4. Network settings".



6. Connections with a computer

6-3. How to install the software

This section describes how to install the Data Transmission Software.

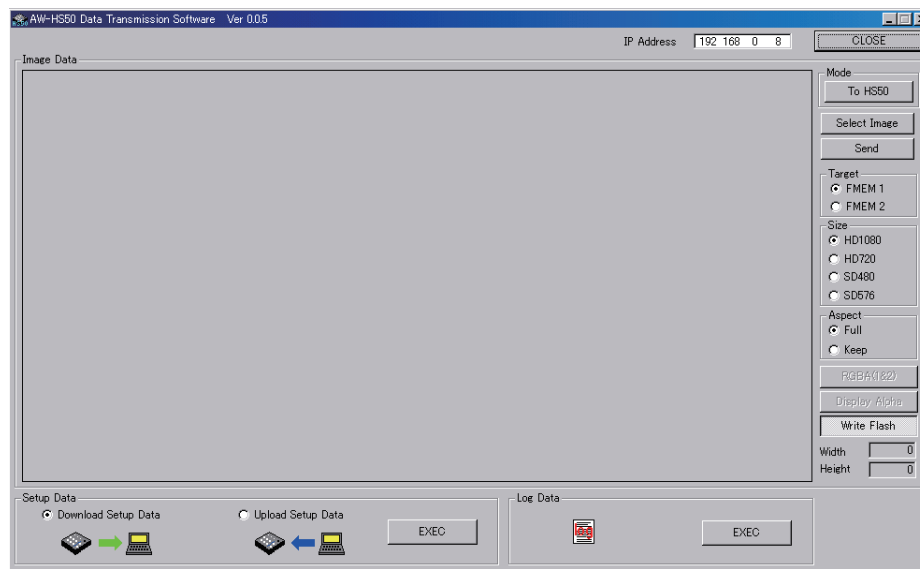
1. Insert the CD-ROM supplied with the unit into the CD-ROM drive of the host computer in which the program will be installed.
2. Copy the entire folder containing “Data Transmission Software” on the CD-ROM onto the hard disk drive of the host computer.

6-4. Basic operations of software

This section describes how to operate the Data Transmission Software.

<Startup>

1. Double-click on “HS50Tool.exe” in the “Data Transmission Software” folder which was copied.



<Exit>

Click the [CLOSE] button.

<Setting the IP address>

Set the unit's IP address in the IP Address setting box.

6. Connections with a computer

6-5. Transferring the image data

6-5-1. Transferring the image data from the computer to the unit

1. Select the mode.
Check that [To HS50] appears in the [Mode] field in the "Image Data".
If [From HS50] appears instead, click the [From HS50] button so that [To HS50] appears.
 2. When the [Select Image] button is clicked, the file selection dialog box appears on the screen.
Select the data files to be transmitted, and click [OK].
The image is now displayed in the image display area, and its horizontal and vertical dimensions appear in the [Width] and [Height] fields at the bottom right.
 3. Select the transmission destination of the data in the [Target] field.
FMEM 1: Unit's frame memory 1
FMEM 2: Unit's frame memory 2
 4. In the [Size] field, select the size of the image to be transmitted to the unit.
HD1080 (1920×1080), HD720 (1280×720), SD480 (720×487) or SD576 (720×576) can be selected as the size.
If the image is in a different video format from the ones supported by the unit, the output will not be displayed properly.
 5. In the [Aspect] field, select the scaling method.
If the size of the image to be transmitted and the selected image differ, the image will be automatically scaled according to one of the following methods.
Full: The size of the image is increased or reduced so that it fits the size selected in the [Size] field.
If the aspect ratio of the image to be transmitted differs from that of the selected image, the ratio between the horizontal and vertical dimensions will be changed.
Keep: The image is expanded or reduced while its original aspect ratio is kept unchanged.
Any empty spaces in the image will appear black.
- The [RGBA(1&2)] button can be selected when images containing the alpha channel are to be transmitted.
Click the [RGBA(1&2)] button and select FMEM 1 in the [Target] field to transmit the RGB images to frame memory 1 (FMEM 1) and the alpha channel images to frame memory 2 (FMEM 2).
When the [Display Alpha] button is clicked, the alpha channel images appear as a preview display.
6. When the [Send] button is clicked, data is transmitted to the unit and data is saved in frame memory and flash memory.
 - When not saving data in the flash memory, click the [Write Flash] button to deselect the [Write Flash] button.

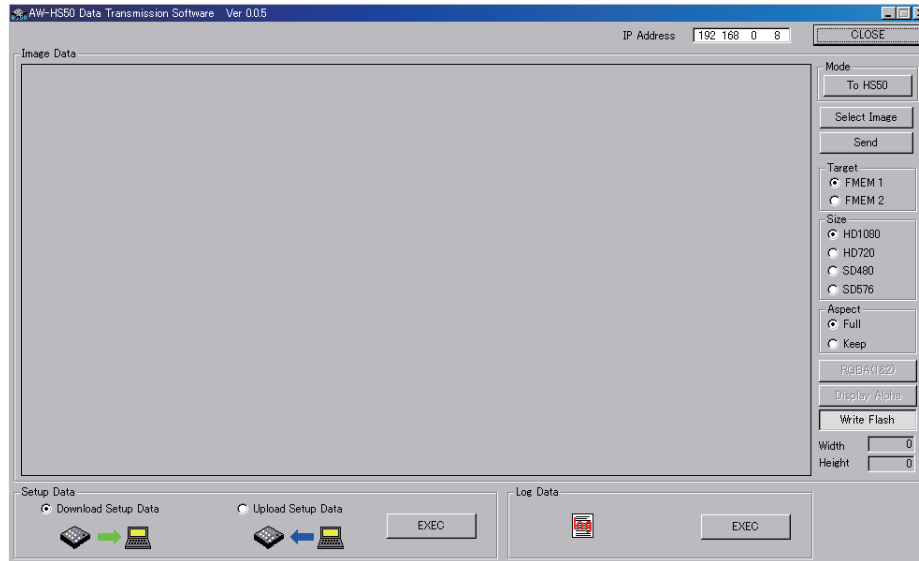
6. Connections with a computer

6-5-2. Transferring the unit's image data to the computer

1. Select the mode.

Check that [From HS50] appears in the [Mode] field.

If [To HS50] appears instead, click the [To HS50] button so that [From HS50] appears.



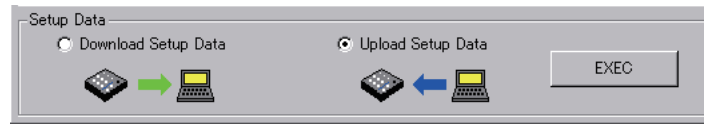
2. Select the data to be imported to the host computer in the [Target] field.
FMEM 1: Data in unit's frame memory 1
FMEM 2: Data in unit's frame memory 2
3. When the [Get] button is clicked, the data is imported from the unit.
The image is now displayed in the image display area, and its horizontal and vertical dimensions appear in the Width and Height fields at the bottom right.
4. When the [Save Image] button is clicked, the file save dialog box appears on the screen.
Select the data file to be transmitted, and click [Save].

6. Connections with a computer

6-6. Transferring the setup data

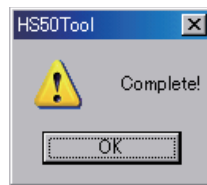
6-6-1. Transferring the setup data from the computer to the unit

1. Select "Upload Setup Data" under "Setup Data", and click the [EXEC] button.



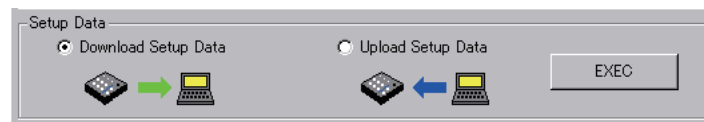
2. On the screen which is now displayed, select the setup data to be transferred from the host computer to the unit. Select the folder and file containing the setup data, and click [Save].
(The file extension is *.m50.)

3. When the data has been transferred successfully, the screen below is displayed.



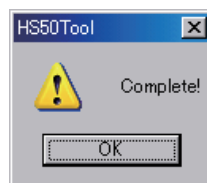
6-6-2. Transferring the unit's setup data to the computer

1. Select "Download Setup Data" under "Setup Data", and click the [EXEC] button.



2. On the screen which is now displayed, select the folder and file containing the setup data, and click [Save].
(The file extension is *.m50.)

3. When the data has been transferred successfully, the screen below is displayed.



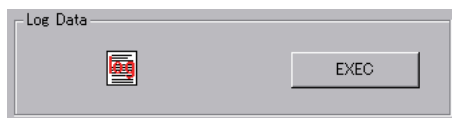
- The IP addresses, subnet masks, default gateways and MAC addresses are not transferred.

6. Connections with a computer

6-7. Importing the log data

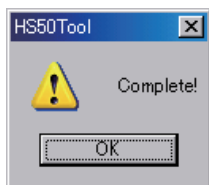
The log data recorded in the unit can be imported to a computer.

1. Click the [EXEC] button under “Log Data”.



2. On the screen which is now displayed, select the folder and file containing the log data, and click [Save].
(The file extension is *.log.)

3. When the data has been transferred successfully, the screen below is displayed.



7. Function for linking up with the remote camera controller

A highly efficient operating environment can be established by linking the unit with the remote camera controller (AW-RP50) sold separately.

This section describes how the unit is to be connected to the AW-RP50 and the what kind of functions can be linked.

For details to how to establish the settings at the AW-RP50, refer to the Operating Instructions accompanying the AW-RP50.

7-1. Connecting the unit to the AW-RP50

When the unit and AW-RP50 are connected using a LAN cable and the link function is set, the indicator of the unit's LINK lamp lights, and the state in which the link function can be used is established.

Only one switcher (this unit) can be used by the link function from the AW-RP50.

[Settings established at the unit]

[13] Operation Menu 10. CamContLink

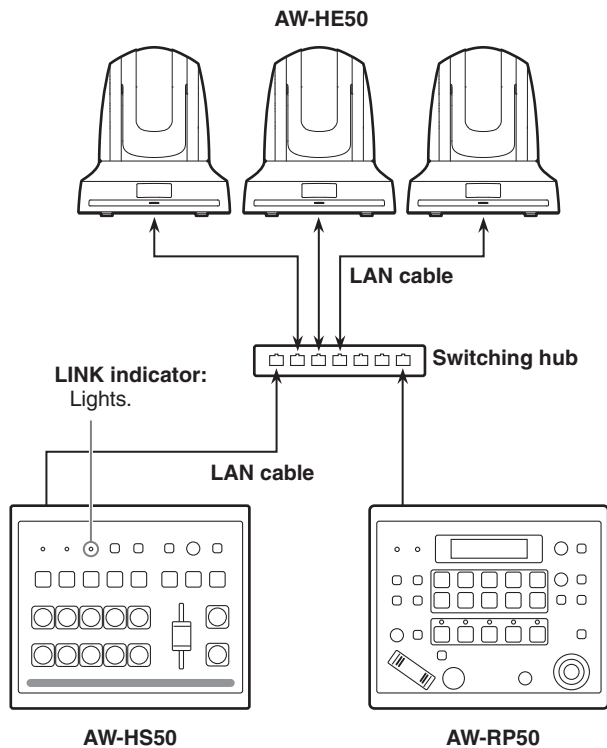
On: The function for linking with the AW-RP50 is enabled.

Off: The function for linking with the AW-RP50 is disabled.

[Settings established at the AW-RP50]

- Set the IP address of the switcher (this unit) to be linked.
- Enable the function for linking with the switcher.

For further details on the setting methods, refer to the Operating Instructions accompanying the AW-RP50.



7. Function for linking up with the remote camera controller

7-2. Linkable functions

7-2-1. Switching the switcher bus materials

The unit's bus materials can be switched in tandem with the camera selection operations performed by the AW-RP50.

[Settings established at the AW-RP50]

- Set the remote cameras that correspond to the unit's image input.
(On the AW-RP50, SDI IN 1 to 4 are displayed as INPUT1 to 4 while DVI-IN is displayed as INPUT5.)
- Enable the bus switching function.
- Set AUX, PVW, PinP or KEY (key fill bus) as the bus targeted for switching.

7-2-2. Focus assist function

It is possible to switch between the multi view display screen and camera image full screen with a single AW-RP50 button operation.

It is the AUX bus materials that are targeted for switching.

[Settings established at the AW-RP50]

- Set the remote cameras that correspond to the unit's image input.
(On the AW-RP50, SDI IN 1 to 4 are displayed as INPUT1 to 4 while DVI-IN is displayed as INPUT5.)
- Assign the focus assist function (FASIST) to one of the USER buttons on the AW-RP50.

[Operations performed at the AW-RP50]

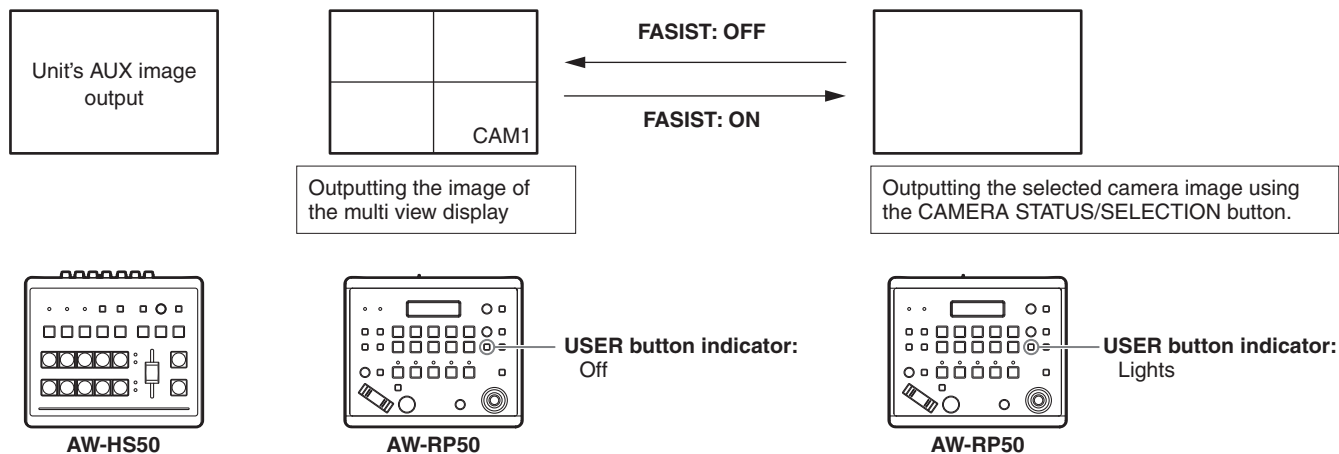
Each time the USER button to which FASIST has been assigned is pressed, the indicator of the USER button turns on or off, and the AUX bus material is switched.

When the USER button indicator has lighted:

The image of the remote camera selected by the CAMERA STATUS/SELECTION button is selected as the AUX bus material.

When the USER button indicator has gone off:

The image of the multi view display is selected as the AUX bus material.



7. Function for linking up with the remote camera controller

7-2-4. Displaying the camera icon

When signals from the remote camera selected using the AW-RP50 are supplied to the unit, the “” camera icon can be displayed on the multi view display.

The camera icon is displayed in front of the name of the material which is displayed on the split screen.

[Settings established at the unit]

Set the input signal status to “On” (display) by operating the menu item below.

[8] MultiView Out/Frame Menu 6. Input Status

[Settings established at the AW-RP50]

- Set the remote cameras which will correspond with the unit's image inputs.
(On the AW-RP50, SDI IN 1 to 4 are displayed as INPUT1 to 4 while DVI-IN is displayed as INPUT5.)
- When a remote camera has been selected by the AW-RP50, the function (CAMSEL) for sending the selection information is enabled.

7-2-5. Operating the unit's parameters from the AW-RP50

The unit's settings can be changed by operating the PAN/TILT lever and ZOOM button on the AW-RP50.

[Settings established at the AW-RP50]

- Set what is to be targeted by the PAN/TILT lever and ZOOM button operations in the switcher (SW).

[Unit's menu items which can be operated]

When the following submenus are displayed on the unit, the PAN/TILT lever and ZOOM button on the AW-RP50 operations take effect.

[3] PinP Menu

The PinP position can be changed using the PAN/TILT lever, and the PinP size can be changed using the ZOOM button.

[6] ChromaKey Menu

While the chroma key marker is displayed, the chroma key marker position can be changed using the PAN/TILT lever, and the chroma key marker size can be changed using the ZOOM button.

[2] WIPE Menu

The wipe start position can be changed using the PAN/TILT lever.

7-2-6. Sending and receiving the tally information

The information of the ON AIR tally sent by the unit over the network can be received by the AW-RP50.

[Settings established at the AW-RP50]

- Set the remote cameras that correspond to the unit's image input.
(On the AW-RP50, SDI IN 1 to 4 are displayed as INPUT1 to 4 while DVI-IN is displayed as INPUT5.)
- Enable the function used to receive the information of the ON AIR tally sent by the unit over the network.

Table of menu items

No.	Sub menu	Setting item	Setting								
1	TIME/CBGD Menu	1 AUTO Time	Setting range	0 to 33s (59.94Hz)		0 to 999f					
			Initial value	1s		0f					
		2 PinP Time	Setting range	0 to 33s (59.94Hz)		0 to 999f					
			Initial value	1s		0f					
		3 KEY Time	Setting range	0 to 33s (59.94Hz)		0 to 999f					
			Initial value	1s		0f					
		4 FTB Time	Setting range	0 to 33s (59.94Hz)		0 to 999f					
			Initial value	1s		0f					
		5 FTB Source	Setting range	FMEM1, FMEM2, CBGD, White, Black							
			Initial value	Black							
		6 AUX BUS Trans	Setting range	0 to 33s (59.94Hz)		0 to 999f		Enable, Disable			
			Initial value	1s		0f		Disable			
		7 PinP BUS Trans	Setting range	0 to 33s (59.94Hz)		0 to 999f		Enable, Disable			
			Initial value	1s		0f		Disable			
		8 PinP EFFDSLV	Setting range	0 to 33s (59.94Hz)		0 to 999f		Enable, Disable			
			Initial value	1s		0f		Disable			
9 Set CBGD Col	Setting range	White, Yellow, Cyan, Green, Magenta, Red, Blue, Black									
	Initial value	White									
10 Adj CBGD Col	Setting range	H	0.0 to 359.9		S	0.0 to 100.0		L	0.0 to 108.0		
	Initial value		0.0			0.0			100.0		
2	WIPE Menu	1 Pattern	Setting range	1 to 13							
			Initial value	1							
		2 Direction	Setting range	N, R, N/R							
			Initial value	N/R							
		3 Border/Soft	Setting range	B	0.0 to 100.0		S	0.0 to 100.0			
			Initial value		0.0			0.0			
		4 Set Border Col	Setting range	White, Yellow, Cyan, Green, Magenta, Red, Blue, Black							
			Initial value	White							
		5 Adj Border Col	Setting range	H	0.0 to 359.9		S	0.0 to 100.0		L	0.0 to 108.0
			Initial value		0.0			0.0			100.0
6 Position	Setting range	X	-100.00 to 100.00		Y	-100.00 to 100.00					
	Initial value		0.00			0.00					
7 Set To Preset	Setting range	1 to 4									
	Initial value	1									
3	PinP Menu	1 Shape	Setting range	Square, Circle, Heart, Flower, Star							
			Initial value	Square							
		2 Pos:X/Y/Size	Setting range	X	-100.00 to 100.00		Y	-100.00 to 100.00		S	0.00 to 100.00
			Initial value		0.00			0.00			25.00
		3 PVW	Setting range	On, Off							
			Initial value	Off							
		4 Border/Soft	Setting range	B	0.0 to 100.0		S	0.0 to 100.0			
			Initial value		0.0			0.0			
		5 Set Border Col	Setting range	White, Yellow, Cyan, Green, Magenta, Red, Blue, Black							
			Initial value	White							
6 Adj Border Col	Setting range	H	0.0 to 359.9		S	0.0 to 100.0		L	0.0 to 108.0		
	Initial value		0.0			0.0			100.0		
7 Trim Adjust1	Setting range	Manual, Off, 4:3		L	-50.00 to 50.00		T	-50.00 to 50.00			
	Initial value	Off			-40.00			40.00			
8 Trim Adjust2	Setting range	R	-50.00 to 50.00		B	-50.00 to 50.00					
	Initial value		40.00			-40.00					
9 Set To Preset	Setting range	1 to 4									
	Initial value	1									

Table of menu items

No.	Sub menu	Setting item	Setting							
4	KEY Setup Menu	1 Key Type	Setting range		Luminance(ChrmOff), Luminance(ChrmOn), Linear, Chroma					
			Initial value		Luminance(ChrmOff)					
		2 Fill	Setting range		Bus, Matte					
			Initial value		Bus					
		3 PVW	Setting range		On, Off					
			Initial value		Off					
		4 Set Fill Col	Setting range		White, Yellow, Cyan, Green, Magenta, Red, Blue, Black					
			Initial value		White					
		5 Adj Fill Col	Setting range		H	0.0 to 359.9	S	0.0 to 100.0	L	0.0 to 108.0
			Initial value		H	0.0	S	0.0	L	100.0
		6 Edge Type	Setting range		Off, Border, Drop, Shadow, Outline					
			Initial value		Off					
		7 Edge Direction	Setting range		0, 45, 90, 135, 180, 225, 270, 315					
			Initial value		0					
8 Edge Width	Setting range		0 to 4							
	Initial value		2							
9 Set Edge Col	Setting range		White, Yellow, Cyan, Green, Magenta, Red, Blue, Black							
	Initial value		Black							
10 Adj Edge Col	Setting range		H	0.0 to 359.9	S	0.0 to 100.0	L	0.0 to 108.0		
	Initial value		H	0.0	S	0.0	L	0.0		
5	KEY Adjust Menu	1 Clip	Setting range		0.0 to 108.0					
			Initial value		0.0					
		2 Gain	Setting range		0.0 to 200.0					
			Initial value		100.0					
		3 Density	Setting range		0.0 to 100.0					
			Initial value		100.0					
		4 Invert	Setting range		On, Off					
			Initial value		Off					
		5 Mask	Setting range		On, Off					
			Initial value		Off					
		6 Mask Adjust1	Setting range		L	-50.00 to 50.00	R	-50.00 to 50.00		
			Initial value		L	-25.00	R	25.00		
		7 Mask Adjust2	Setting range		T	-50.00 to 50.00	B	-50.00 to 50.00		
			Initial value		T	25.00	B	-25.00		
8 Mask Invert	Setting range		On, Off							
	Initial value		Off							
6	ChromaKey Menu	1 Marker	Setting range		On, Off					
			Initial value		Off					
		2 Sample	Setting range		Start					
			Initial value		Start					
		3 Marker Pos	Setting range		X	-50.0 to 50.0	Y	-50.0 to 50.0	S	1.0 to 80.0
			Initial value		X	0.0	Y	0.0	S	10.0
		4 Marker Aspect	Setting range		-50.0 to 50.0					
			Initial value		0.0					
		5 Ref Adjust	Setting range		H	0.0 to 359.9	S	0.0 to 120.0	L	0.0 to 108.0
			Initial value		H	354.0	S	100.0	L	7.0
		6 Y-Influence	Setting range		0.0 to 100.0					
			Initial value		0.0					
		7 Radius	Setting range		H	0.0 to 100.0	S	0.0 to 100.0		
			Initial value		H	100.0	S	50.0		
8 Soft	Setting range		0.0 to 100.0							
	Initial value		0.0							
9 Cancel	Setting range		0.0 to 100.0							
	Initial value		0.0							

Table of menu items

No.	Sub menu	Setting item	Setting	
7	MultiView Pattern Menu *****: Name of the currently set material	1 Split	Setting range	4Split, 5-aSplit, 5-bSplit, 6-aSplit, 6-bSplit, 9Split, 10-aSplit, 10-bSplit
			Initial value	10-aSplit
		2 Pos1 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	PGM
		3 Pos2 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	PVW
		4 Pos3 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	SDI-IN1(*****)
		5 Pos4 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	SDI-IN2(*****)
		6 Pos5 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	SDI-IN3(*****)
		7 Pos6 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	SDI-IN4(*****)
8	MultiView Out/Frame Menu	8 Pos7 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	DVI-IN(*****)
		9 Pos8 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	FMEM1
		10 Pos9 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	FMEM2
		11 Pos10 Source	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), CBGD, FMEM1, FMEM2, PGM, PVW, KEY OUT, AUX
			Initial value	AUX
9	XPT SW Assign Menu *****: Name of the currently set material	1 Frame	Setting range	LUM0%, LUM25%, LUM50%, LUM75%, LUM100%, Off
			Initial value	LUM75%
		2 Character	Setting range	LUM0%, LUM25%, LUM50%, LUM75%, LUM100%, Off
			Initial value	LUM75%
		3 Label	Setting range	On, Off
			Initial value	On
		4 Tally	Setting range	Red, Red+Green, Off
			Initial value	Red+Green
		5 Level Meter	Setting range	On, Off
			Initial value	Off
		6 Input Status	Setting range	On, Off
			Initial value	On
		1 XPT1	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign
			Initial value	SDI-IN1(*****)
		2 XPT2	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign
			Initial value	SDI-IN2(*****)
		3 XPT3	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign
			Initial value	SDI-IN3(*****)
		4 XPT4	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign
			Initial value	SDI-IN4(*****)

Table of menu items

No.	Sub menu	Setting item	Setting								
9	XPT SW Assign Menu *****: Name of the currently set material	5 XPT5	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign							
			Initial value	DVI-IN(*****)							
		6 XPT6	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign							
			Initial value	FMEM1							
		7 XPT7	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign							
			Initial value	FMEM2							
		8 XPT8	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign							
			Initial value	CBGD							
		9 XPT9	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign							
			Initial value	CBAR							
10 XPT10	Setting range	SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign									
	Initial value	Black									
10	Input Menu *****: Name of the currently set material	1 SDI-IN1(*****)	Display only								
		2 SDI-IN2(*****)									
		3 SDI-IN3(*****)									
		4 SDI-IN4(*****)									
		5 DVI-IN(*****)									
		10.1	Input Menu/SDI-IN1 (*****) *****: Name of the currently set material	1 Mode	Setting range	Normal, DbyD					
Initial value	Normal										
2 Freeze Select	Setting range			Frame, Field							
	Initial value			Frame							
3 Freeze	Setting range			On, Off							
	Initial value			Off							
4 Name Type	Setting range			Default, Preset, User, CAM Name							
	Initial value			Default							
5 Name	Setting range			Max. 10 characters can be set							
	Initial value			INPUT1							
6 VPrc/YGain/Ped	Setting range			On, Off		Y	0.0 to 200.0		P	-20.0 to 20.0	
	Initial value			Off			100.0			0.0	
7 VPrc:CGain/Hue	Setting range			C	0.0 to 200.0		H	0.0 to 359.9			
	Initial value				100.0			0.0			
10.2	Input Menu/SDI-IN2 (*****) *****: Name of the currently set material	1 Mode	Setting range	Normal, DbyD							
			Initial value	Normal							
		2 Freeze Select	Setting range	Frame, Field							
			Initial value	Frame							
		3 Freeze	Setting range	On, Off							
			Initial value	Off							
		4 Name Type	Setting range	Default, Preset, User, CAM Name							
			Initial value	Default							
		5 Name	Setting range	Max. 10 characters can be set							
			Initial value	INPUT2							
		6 VPrc/YGain/Ped	Setting range	On, Off		Y	0.0 to 200.0		P	-20.0 to 20.0	
			Initial value	Off			100.0			0.0	
		7 VPrc:CGain/Hue	Setting range	C	0.0 to 200.0		H	0.0 to 359.9			
			Initial value		100.0			0.0			

Table of menu items

No.	Sub menu	Setting item	Setting									
10.3	Input Menu/SDI-IN3 (*****) *****: Name of the currently set material	1 Mode	Setting range		Normal, DbyD, UC, Auto							
			Initial value		Normal							
		2 Freeze Select	Setting range		Frame, Field							
			Initial value		Frame							
		3 Freeze	Setting range		On, Off							
			Initial value		Off							
		4 Name Type	Setting range		Default, Preset, User, CAM Name							
			Initial value		Default							
		5 Name	Setting range		Max. 10 characters can be set							
			Initial value		INPUT3							
		6 VPrc/YGain/Ped	Setting range		On, Off		Y	0.0 to 200.0		P	-20.0 to 20.0	
			Initial value		Off			100.0			0.0	
7 VPrc:CGain/Hue	Setting range		C	0.0 to 200.0		H	0.0 to 359.9					
	Initial value			100.0			0.0					
8 UC:Scale/ECPos	Setting range		S	SQ, EC, LB		E	Center, Left, Right					
	Initial value			SQ			Center					
9 UC:Size	Setting range		S	100 to 110								
	Initial value			100								
10 UC:Mvdet/Sharp	Setting range		M	1 to 5		S	1 to 5					
	Initial value			3								
10.4	Input Menu/SDI-IN4 (*****) *****: Name of the currently set material	1 Mode	Setting range		Normal, DbyD, UC, Auto							
			Initial value		Normal							
		2 Freeze Select	Setting range		Frame, Field							
			Initial value		Frame							
		3 Freeze	Setting range		On, Off							
			Initial value		Off							
		4 Name Type	Setting range		Default, Preset, User, CAM Name							
			Initial value		Default							
		5 Name	Setting range		Max. 10 characters can be set							
			Initial value		INPUT4							
		6 VPrc/YGain/Ped	Setting range		On, Off		Y	0.0 to 200.0		P	-20.0 to 20.0	
			Initial value		Off			100.0			0.0	
7 VPrc:CGain/Hue	Setting range		C	0.0 to 200.0		H	0.0 to 359.9					
	Initial value			100.0			0.0					
8 UC:Scale/ECPos	Setting range		S	SQ,EC,LB		E	Center, Left, Right					
	Initial value			SQ			Center					
9 UC:Size	Setting range		S	100 to 110								
	Initial value			100								
10 UC:Mvdet/Sharp	Setting range		M	1 to 5		S	1 to 5					
	Initial value			3								
10.5	Input Menu/DVI-IN (*****) *****: Name of the currently set material	1 Freeze	Setting range		On, Off							
			Initial value		Off							
		2 Name Type	Setting range		Default, Preset, User, CAM Name							
			Initial value		Default							
		3 Name	Setting range		Max. 10 characters can be set							
			Initial value		INPUT5							
		4 Scale	Setting range		Fit-V, Fit-H, FULL							
			Initial value		Fit-V							
		----- <DVI-IN Status> -----										
			Size	Display only	*****							
	H-Freq	**.* kHz										
	V-Freq	**.* Hz										
	Dot Clock	**.* MHz										

Table of menu items

No.	Sub menu	Setting item	Setting				
11	Output Menu	1 SDI-OUT1	Setting range	PGM, PVW, CLN, AUX, MV, KEY OUT			
			Initial value	PGM			
		2 SDI-OUT2	Setting range	PGM, PVW, CLN, AUX, MV, KEY OUT			
			Initial value	PVW			
		3 DVI-OUT	Setting range	PGM, PVW, CLN, AUX, MV, KEY OUT			
			Initial value	AUX			
		4 SDI-OUT:Limit	Setting range	Off, 108, 104, 100			
			Initial value	Off			
		5 DVI-OUT:Size	Setting range	Auto, XGA, WXGA, SXGA, WSXGA+, UXGA, WUXGA, 1080/59.94p, 1080/50p			
			Initial value	Auto			
		6 DVI-OUT:Scale	Setting range	Fit-V, Fit-H, FULL			
			Initial value	Fit-V			
		7 DVI-OUT:Mvdet	Setting range	1 to 5			
			Initial value	3			
12	USER/FMEM Menu	1 USER1	Setting range	PinP Preset, WIPE Preset, PinP PVW,, KEY PVW, GPI Input, GPI Output, CamCont Link, AUX Transition, PinP Transition, EFFDSL, StrFMEM1, StrFMEM2, No Assign			
			Initial value	PinP Preset			
		2 USER2	Setting range	PinP PVW, KEY PVW, GPI Input, GPI Output, CamCont Link, AUX Transition, PinP Transition, EFFDSL, StrFMEM1, StrFMEM2, No Assign			
			Initial value	—			
		3 USER3	Setting range	PinP PVW, KEY PVW, GPI Input, GPI Output, CamCont Link, AUX Transition, PinP Transition, EFFDSL, StrFMEM1, StrFMEM2, No Assign			
			Initial value	—			
		4 USER4	Setting range	PinP PVW, KEY PVW, GPI Input, GPI Output, CamCont Link, AUX Transition, PinP Transition, EFFDSL, StrFMEM1, StrFMEM2, No Assign			
			Initial value	—			
		5 FMEM Select	Setting range	FMEM1, FMEM2			
			Initial value	FMEM1			
		6 AUX To FMEM	Setting range	Rv	On, Off	EX	On
			Initial value		Off		On
		7 FMEM Mode	Setting range	M	Auto, Manu	EX	On
			Initial value		Auto		On

Table of menu items

No.	Sub menu	Setting item	Setting	
13	Operation Menu	1 OSD OUT	Setting range	SDI-OUT2, DVI-OUT, SDI-OUT2+DVI-OUT
			Initial value	SDI-OUT2+DVI-OUT
		2 OSD Size	Setting range	FULL, Upper-Left, Upper-Right, Lower-Right, Lower-Left
			Initial value	FULL
		3 OSD Back	Setting range	On, Off
			Initial value	On
		4 Key Priority	Setting range	PinP over KEY, KEY over PinP
			Initial value	PinP over KEY
		5 Bus Mode	Setting range	A/B, PGM(A)/PST(B), PGM(B)/PST(A)
			Initial value	PGM(A)/PST(B)
		6 Time Unit	Setting range	Sec, Frame
			Initial value	Sec
		7 Slide Lever	Setting range	BKGD, KEY, PinP, BKGD+KEY, NoAssign
			Initial value	BKGD
14	SYSTEM Menu	1 Format	Setting range	1080/59.94i, 1080/50i, 1080/24PsF, 1080/23.98PsF, 720/59.94p, 720/50p, 480/59.94i, 576/50i
			Initial value	1080/59.94i
		2 HiResMV	Setting range	On, Off
			Initial value	Off
		3 16:9SQ	Setting range	On, Off
			Initial value	Off
		4 AUX Anci	Setting range	On, Off
			Initial value	Off
		5 PGM Anci	Setting range	On, Off
			Initial value	Off
		6 PVW Anci	Setting range	On, Off
			Initial value	Off
		7 MV Anci	Setting range	PGM, PVW, Off
			Initial value	Off
15	SYSTEM Status	8 Initial	Setting range	Yes, No
			Initial value	No
		9 IP Address	Setting range	—
			Initial value	192.168.0.8
		10 Subnet Mask	Setting range	—
			Initial value	255.255.255.0
		11 Gateway	Setting range	—
			Initial value	192.168.0.1
		SYSTEM Ver.	Display only	*.*.*.*
		SOFT Ver.		****
		GLUE FPGA Ver.		****
		MAIN FPGA Ver.		****
		FONT Ver.		****
		MAC Address		*-*-*-*-*-*-*-*
		FAN		Alarm, NoAlarm
		Power		Alarm, NoAlarm
		Temperature		Alarm, NoAlarm

Table of menu items

No.	Sub menu	Setting item	Setting	
	BUS Assign Status *****: Name of the currently set material	XPT SW	Display only	1 to 10
		XPT SW Assign		SDI-IN1 to 4(*****), DVI-IN(*****), FMEM1, FMEM2, CBGD, CBAR, Black, NoAssign
		PGM		
		PVW		
		AUX		
		PinP		
		KEY Fill		
		KEY Source		

Appendix (glossary)

Defined below are the terms used in this manual.

Word	Explanation
AB Bus system	A bus control mode. By executing a transition, the A bus and B bus signals are output to the program images alternately.
Ancillary Data	The auxiliary data other than the video signals which is transmitted inside the data stream of the video serial interface. The data superimposed on the vertical blanking period is referred to as the V ancillary data (VANC).
Aspect ratio	The ratio between the horizontal and vertical dimensions of the screen. It is 16:9 for the HD format and 4:3 for the SD format.
AUX [Auxiliary Bus]	A spare bus which can be switched by signals other than the main line output signals.
Border	The area or margin that is added to the edge of a wipe or key. Its width and color can be adjusted. The defocusing of the area around a border is referred to as the soft effect.
Chroma key	This refers to the function for creating the key signals based on the color information of the video signals and combining the keys.
Clip	The threshold level of the luminance when key signals are created from a key source.
Color Background	The signals which are output from the internal color generator and used as the background image.
Cut	This refers to the effect where the display is instantly switched to the next image.
Density	A parameter which is used to adjust the density of the key signals.
Dot by Dot	This treats images as actual size (1×) images. With PinP, it allows SD images to be combined with HD images with no accompanying deterioration in the images themselves.
DVI-D [Digital Visual Interface Digital]	This is a video interface standard. Only digital signals are handled by DVI-D.
Embedded Audio	This refers to the audio data packets which are transferred inside the data stream of the video serial interface.
Flip Flop system (PGM/PST system)	A bus control mode. The signals selected by the program bus are always output as the program images. By executing a transition, the program bus and preset bus signals are switched over.
Frame Memory	A memory which can hold the video signals equivalent to one frame.
Frame Synchronizer	A function which matches the synchronization of non-synchronized video input signals.
Freeze	A function which continues the display of the same image, creating the impression that the image has been “frozen”.
FTB [Fade to Black]	This is the effect where the program image is faded out to the black screen.
GPI [General Purpose Interface]	Interface signals which control auto transition from an external source.
Hue	The color tone of the video signals.
Key Edge	The border or shadow added to the edges of keys.
Key Fill	The signal that uses key combination processing to fill in the areas left blank by the key signals.
Key Gain	A parameter which is used to adjust the amplitude of the key signals.
Key Invert	A function which inverts the key signals.
Key Mask	This is the function that specifies the area for key combination using the box pattern, etc. When only part of the area of the key signals is used, key combination is executed with the unnecessary area masked.
Key Source	The video signals for creating the key signals.

Appendix (glossary)

Word	Explanation
Linear Key	The function which combines keys using monochrome key signals with gradations in its outlines as a reference.
Lum [Luminance]	The brightness portion of the video signals.
Luminance Key	The function which creates key signals based on the luminance (brightness) information of the video signals to combine keys.
ME [Mix Effect]	A video effect device which combines a number of video signals to create mix, wipe, key and other video signals.
Mix	The picture-changing effect produced by overlapping one image with the next. It is also referred to as "dissolve".
Multi View Display	This function combines multiple materials and displays them on one screen. PGM, PVW and the input material can be previewed at the same time on a single screen.
OSD [On Screen Display]	This function enables settings to be performed on the menu screens which are displayed in the monitor output.
PinP [Picture in Picture]	This function combines a sub screen image with the background image.
PVW [Preview]	The function for checking ahead of time the image which will be output after the next transition. The image is output from the PVW system.
PGM [Program Bus]	The bus which always carries the program output signals.
PST [Preset Bus]	The bus which carries the program output signals after the next background transition.
Sat [Saturation]	This refers to the intensity of the color chrominance level of video signals.
SDI [Serial Digital Interface]	The standard by which video signals in various SD and HD formats are transmitted along a single coaxial cable.
Self Key	A function that creates key signals from key fill signals for combining keys.
Setup Data	The memory in which the control panel statuses can be saved and recalled. The button selection statuses as well as the border, color and other setting information can be saved in this memory.
Tally	The signal which outputs the program output statuses of the input signals to an external device. The LED that indicates the program output status on the control panel is also referred to as tally.
Transition	A function that switches from one image to another. Wipe, mix and other effects are available for the images during switching.
Trimming	This is the function that eliminates the unnecessary parts at the top, bottom, left and/or right of the images which are combined using the PinP function.
Up Converter	This is the function that converts material in the SD format into the HD format which yields a high resolution.
Wipe	A video effect in which one image is gradually replaced by another as the boundary between the two is moved using a preselected pattern.

